The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1708.—Vol. XXXVIII. LONDON, SATURDAY, MAY 16, 1868. {STAMPED .. .SIXPENCE, UNSTAMPED--FIVEPENCE

Now ready, price 5s., by post 5s. 4d.,

STATISTICS OF THE MINES OF CORNWALL AND DEVON,

WITH OBSERVATIONS UPON THEM.

BY THOMAS SPARGO, STOCK AND SHAREDEALER,

GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

I beg to inform the mining interest that my work, under the above title, for 1866 and 1867 is now ready. It contains the following particulars—viz., the geological position, present prospects, names of purser, manager, and secretary, with statement of the annual returns of each mine during the last two years, and of total dividends paid to the present time. The work is illustated by a map of Cornwall and Devonshire; geological district maps, divided into eight sections, in which will be shown the boundary lines of each parish, height of hills, sources of rivers, &c.; maps of St. Just, St. Ives, Marazion, Helston, Gwinear, Chiverton, Bodmin, Liskeard, Devon Great Consols, Ashburton, and Exmouth mining districts, showing boundary lines of each property, with the lodes, &c., traversing them.

It also contains transverse and longitudinal sections of Dolcoath Mine (kindly supplied by the late Captain Charles Thomas); section of workings in Botallack Mine (supplied by the manager, S. H. James, Esq.); longitudinal sections of workings upon the main lode in Great Wheal Vor and Tresavean Mines; geological map of the Fowey district (supplied by Major Davis, R.M.); historical account of the Devon Great Consols, and of all the principal mines in the two counties.

PLANS AND SECTIONS.

BOTALLACK MINE—Section of Main Lode.
CORNWALL—Eastern Division of.
" —Eastern-Central Division of.
" —Parliamentary Division of.
" —Western Division of.
" —Western-Central Division of.
DEVONSHIRE—Parliamentary Division of.
DEVON GREAT CONSOLS MINING DISTRICT.
FOWEY AND PAR DISTRICT.
GREAT WHEAL VOR DISTRICT.
METAL LODE—Longitudinal Section of.
MARAZION DISTRICT.
PERRANZABULOE DISTRICT.
REDRUTH, GWENNAP, AND CAMBORNE DISTRICTS.
SOUTH POLBERROW.
ST. IVES DISTRICT.
ST. JUST DISTRICT.
TAVISTOCK DISTRICT.
WEST DEVON CONSOLS.
WEST DOLCOATH MINE—Surface Plan of.

MINES.

Abraham Consols.
Ale and Cakes.
Alfred Consols.
Angarrack Consols.
Ashburton United.
Balleswidden.
Balmynhear.
Balnoon.
Bartinney.
Basset Consols.
Bedford Consols.
Bedford United.
Beeralston & Beerferis.
Bell Vean.
Billiia.
Binner Downs.
Birch Aller.
Bodmin Consols.
Boiling Well.
Bolingey.
Boscaswell.
Boscaswell Cliff.
Boscawen.
Boscean.
Boscundle.
Bosprowal.
Boswedden and Wheal Castle.
Bosworthen and Penzance Consols.
Botelet.
Bottallack.
Bottle Hill.
Bray Down.
Brea Consols.
Brewer.
Bridford Consols.
Brookwood.
Budnick Consols.
Buller and Basset.
Buller and Bertha.
Buckland Consols.
Burra Burra.
Butterdon.
Calvadnack.
Calstock Consols.
Camborne Consols.
Camborne Vean.
Cape Cornwall.
Caradon Copper.
Caradon, The
Caradon Consols.
Caradon and Phœnix.
Caradon United.
Caradon Vale.
Carbona.
Cardrew Consols.
Cargoll.
Carharrack.
Carleen Wheal Vor.
Carn Brea.
Carn Camborne.
Carne Escalls.
Carn Vyvyan.
Carnyorth.
Caroath United.
Carrack Dews.
Carzise.
Cassiterides, The
Cathedral.
Charlestown United.
Charlotte United.
Chiverton Wheal Rose.
Christow Consols.
Clifford Amalgamated.
Elijah and Wentworth.
Collacombe.
Colquite & Callington.
Comford.
Concluding Observations.
Consolidated Mines.
Cook's Kitchen.
Coombmartin.
Copper Hill.
Cornelloe.
Cornubia.
Cornwall.
— and Devon (Economic Conditions of)
— Eastern
— Eastern Central
— Great Consols.
— Returns of
— Western
— Western Central
Craddock Moor.
Crane.
Crelake.
Crenver and Abraham.
Criddis.
Croft-an-Vor.
Crowan Consols.
Crowan and Wendron.
Cuddra.
Cupboard Hill.
Cusvey.
Denham Bridge.
Devon and Bedford.
Devon & Cornwall (Economic Conditions of)
Devon & Cornwall Uni.
Devon and Courtenay.
Devon Buller.
Devon Burra Burra.
Devon G Consols.
Devon Poldice.
Devon Wheal Lopes.
Devon Wheal Union.
Devonshire.
Devonshire, Returns of
Ding Dong.
Dolcoath.
Dollar.
Drake Walls.
Druid.
Duffield.
Duke of Cornwall.
Dulta.
Dunsley Wh. Phœnix.
East Alfred Consols.
East Basset & Grylls.
East Bottle Hill.
East Brookwood.
East Budnick & Mount.
East Caradon.
East Carn Brea.
East Collacombe.
East Crinnis and South Par.
East Crowndale.
East Downs.
East Fortune.
East Godolphin.
East Gunnislake and South Bedford.
East Kit Hill.
East Lady Bertha.
East Margaret.
East Penharget.
East Phœnix.
East Polberrow.
East Pool.
East Providence.
East Rosewarne.
East Sortridge.
East St. Just United.
East Tolcarne.
East Tolgus.
East Trefusis.
East Tresavean.
East Treskerby.
East Trumpet.
East Wheal Abraham.
East Wheal Agar.
East Wheal Basset.
East Wheal Buller.
East Wheal Damsel.
East Wheal Ellen.
East Wheal Falmouth.
East Wheal George.
East Wheal Grenville.
East Wheal Grylls.
East Wheal Leisure.
East Wheal Lovell.
East Wheal Music.
East Wheal Neptune.
East Wheal Reeth.
East Wheal Robert.
East Wheal Rose.
East Wheal Russell.
East Wheal Seton.
East Wheal Virgin.
East Wheal Vor.
Ellen United.
First Division.
Forest, The.
Fourth Division.
Fowey Consols.
Fowey and Par.
Fursdon.
Furze Hill Wood Con.
Frank Mills.
Garden.
Garlidna.
Gawton.
Gernick.
Gilmar.
Glasgow Caradon Con.
Glasgow Wheal Gill.
Godolphin.
Godolphin Hill.
Gonamena.
Goschen.
Gover.
Grambler & St. Aubyn.
Great Brigan.
Great Caradon.
Great Dowgas.
Great East Lovell.
Great North Downs.
Great North Tolgus.
Great North Vor.
Great Onslow Consols.
Great Polgooth.
Great Roughter Consols
Great Sortridge.
Great South Chiverton.
Great South Tolgus.
Great Treveddoe.
Great West Sortridge.
Great Western.
Great Wheal Alfred.
Great Wheal Baddern.
Great Wheal Basset.
Great Wheal Busy.
Great Wheal Charlotte.
Great Wheal Fortune.
Great Wheal Grylls.
Great Wheal Metal.
Great Wheal Vor.
Grylls Wheal Florence.
Gunnislake (Clitters).
Gurlyn.
Gwinear Consols.
Hallamanning & Croftgothal.
Hallenbeagle.
Hawke's Point.
Hawkmoor.
Hendra Peter.
Hennock.
Herland.
Herodsfoot.
Hillbridge Consols.
Hingston Down Consols
Huckworthy.
Huntingdon.
Investment, Mining as a Legitimate
Ivey Tor.
Kelly Bray.
Killifreth.
Kit Hill.
Lady Bertha.
Lambo.
Lamin.
Lanivet Consols.
Leawood.
Leeds and Lemon.
Leeds and St. Aubyn.
Lelant Consols.
Lewis.
Lewis Russell.
Lovell Consols.
Marke Valley.
Maudlin.
Mellanear.
Metha.
Mill Moor.
Mill Pool.
Mineral Bottom.
Mineral Court.
Mining District, Hayle to Truro.
Mining as a Legitimate Investment.
Molland.
Morgauna.
Morvah and Zennor.
Mulberry.
Nancegollan.
Nangilos.
Newton St. Cyres.
New Bampfylde.
New Birch Tor & Vitifer
New Clifford.
New Concord.
New Cornish.
New Crow Hill.
New Devon Consols.
New East Birch Tor & Vitifer.
New East Russell.
New Great Consols.
New Hendra.
New Martha.
New Pembroke.
New Quay.
New Roscwrne.
New South Caradon.
New Trevenen.
New Wendron Consols.
New Wheal Frances.
New Wheal Lovell.
New Wheal Rose.
New Wheal Seton.
New Wheal Towan.
New Wheal Vor and East Metal.
Noble Dale.
North Cargoll.
North Consols.
North Crenver.
North Crofty.
North Damsel.
North Devon.
North Devon Consols.
North Dolcoath.
North Downs.
North Exmouth.
North Frances.
North Grambler.
North Great Work.
North Grylls.
North Hallenbeagle.
North Herodsfoot.
North Jane.
North Leisure.
North Levant.
North Ludcott.
North Phœnix.
North Pool.
North Prospidnick.
North Providence.
North Rosewarne.
North Roskear.
North Shepherds.
North Tamar.
North Tavy.
North Trelawny.
North Trelether.
North Treskerby.
North Wheal Buller.
North Wheal Busy.
North Wheal Chiverton
North Wheal Metal (Breage).
North Wheal Metal (Sithney).
North Wheal Robert.
North Wheal Seton.
North Wheal Unity.
North Wrey.
Observations, Conclud.
Okehampton.
Okel Tor.
Old Gunnislake.
Old Tolgus.
Old Tolgus United.
Par Consols.
Par and St. Blazey.
Paul's Downs.
Pedn-an-drea.
Penberthy Crofts.
Penbugle.
Pencourse.
Pendarves Consols.
Pendarves United.
Pendeen Consols.
Pengenna.
Penhaldarva.
Penhale and Lomax.
Penhale Moor.
Penhale Wheal Vor.
Penhallow Moor.
Penhalls.
Penhauger.
Pennance.
Penrose.
Penstruthal.
Perran St. George.
Perran Wheal Maria.
Perran Wheal Virgin.
Phœnix.
Poldory.
Polhigey Moor.
Polladras Downs.
Prideaux Wood.
Prince Arthur Consols.
Prince Coburg.
Prince of Wales.
Providence.
Pulrose.
Realton.
Recover the Fault.
Redmoor.
Relistian.
Retanna Hill.
Rickard's Wheal Rose.
Roborough Down.
Roscrow United.
Rose Consols.
Rose & Chiverton Uni.
Roseinvale.
Rosewall Hill and Ransom United.
Rosewarne Consols.
Rosewarne & Herland.
Rosewarne United.
Roskear.
Roskearnoweth.
St. Aubyn and Grylls
St. Austell Consols.
St. Day United.
St. Ives Consols.
St. Ives Wheal Allen.
St. Just Consols.
St. Just United.
Scorrier Consols.
Second Division.
Shepherds.
Sidney Godolphin.
Silver Brook.
Silver Valley.
Silver Vein.
Sithney Wheal Metal.
Sithney Wheal Vor.
Sortridge Consols.
South Alfred.
South Alfred Consols.
South Buller and West Penstruthal.
South Caradon.
South Carn Brea.
South Chiverton.
South Clifford.
South Condurrow.
South Consols.
South Cornwall.
South Crenver.
South Crinnis.
South Crowndale.
South Dolcoath & Carnarthen Consols.
South Exmouth.
South Fowey Consols.
South Garras.
South Goriand.
South Herodsfoot.
South Lady Bertha.
South Phœnix.
South Polberrow.
South Providence (Lelant).
South Providence (Sithney).
South Rosewarne.
South Roskear.
South St. George.
South Tamar.
South Towan.
South Tresavean.
South Trevenna.
South Wheal Basset.
South Wheal Betsy.
South Wheal Charlotte.
South Wheal Crofty.
South Wheal Ellen.
South Wheal Fortune.
South Wheal Frances.
South Wheal Grenville.
South Wheal Kitty (Lelant).
South Wheal Kitty (St. Agnes).
South Wheal Leisure.
South Wheal Lovell.
South Wheal Rose.
South Wheal Seton.
South Wheal Tolgus.
South Zeal Consols.
Spearne Consols.
Spearne Moor.
Stencoose and Mawla.
Stray Park.
Swanpool.
Swincombe Vale.
Tamar Valley.
Tavistock United.
Tavy Consols.
Tehidy.
Third Division.
Tincroft.
Ting Tang.
Towans.
Tolvadden.
Tolcarne.
Tolgus—Old.
Tokenbury
Trannack.
Trebarvah.
Trefusis.
Trefulack.
Tregullow Consols.
Trehane.
Trehill.
Trelow.
Treloweth.
Trelogan.
Trelawny.
Trelyon Consols.
Treleigh Consols.
Trencrom.
Trerew Wheal Rose.
Tresavean & Trethurup.
Trenance.
Treskerby.
Trethellan.
Trethellan and West Trethellan.
Tretoll and Messer.
Trevaskus.
Trevarno.
Treven.
Trevenna. [heere.
Trevenen and Tremen-
Trevelyan.
Treviskey.
Trevaunance.
Trevoole.
Trewavas.
Treweatha.
Trewollack.
Treworlis.
Trumpet Consols.
Trungle.
Truthwell.
Tyringham Consols.
Tywarnhaile.
Virtuous Lady.
Walkham and Poldice
Wendron Consols.
Wendron United.
Weeth.
Wentworth Consols.
West Abraham and Wheal Maria.
West Alfred.
West Alfred Consols.
West Binner Downs.
West Birch Tor.
West Bosprowal.
West Buller.
West Briton.
West Cargoll.
West Caradon.
West Chiverton.
West Clifford.
West Cornwall Consols.
West Condurrow.
West Craddock Moor.
West Crinnis.
West Central District.
West Devon.
West Devon Consols.
West Dolcoath.
West Drake Walls.
West Fowey Consols.
West Fursdon.
West Godolphin.
West Great Work.
West Maria and Fortescue.
West Martha.
West Providence.
West Princess of Wales
West Prince of Wales.
West Polmear.
West Par Consols.
West Phœnix.
West Rose Down.
West Rosewarne Untd.
West Sharp Tor.
West Sortridge Consols
West South Caradon.
West St. Ives.
West Stray Park.
West Tolcarne.
West Tolvadden.
West Towan.
West Treasury.
West Tremayne.
West Trelawny.
West Wheal Basset.
West Wheal Damsel.
West Wheal Edward.
West Wheal Frances.
West Wheal Grylls.
West Wheal Jane.
West Wheal Lovell.
West Wheal Margaret.
West Wheal Prosper.
West Wheal Seton.
West Wheal Tolgus.
West Wheal Trelyon.
West Wheal Vor.
West Wheal Virgin.
Western Cornwall.
Wheal Ann United.
Wheal Anna.
Wheal Anson.
Wheal Anna (St. Hil.)
Wheal Annie.
Wheal Andrew.
Wheal Acland.
Wheal Albert.
Wheal Agar.
Wheal Arthur.
Wheal Augusta.
Wheal Arundel Consols
Wheal Basset.
Wheal Bal.,
Wheal Basset & Grylls.
Wheal Beauchamp.
Wheal Benny.
Wheal Blencowe.
Wheal Bonnie.
Wheal Buller.
Wheal Carne.
Wheal Caroline.
Wheal Carpenter.
Wheal Caradon.
Wheal Chance.
Wheal Cherry.
Wheal Clifford.
Wheal Clowance.
Wheal Coates.
Wheal Colt.
Wheal Crebor.
Wheal Crofty.
Wheal Crowndale.
Wheal Cunning.
Wheal Cupid.
Wheal Curtis.
Wheal Damsel (Gwen.)
Wh. Damsel (St. Just).
Wheal Daniel.
Wheal Diamond.
Wheal Dyke.
Wheal Edward.
Wheal Ellen.
Wheal Eliza.
Wheal Emily.
Wheal Emily Henrietta
Wheal Emma.
Wheal Ennis.
Wheal Falmouth and Sperris.
Wheal Fortune.
Wheal Fortune (Gwen.)
Wheal Franco.
Wheal Friendship (Mary Tavy).
Wheal Friendship (St. Hilary).
Wheal Friendly.
Wheal Girl.
Wheal Glyn.
Wheal Golding.
Wheal Gorland.
Wheal Gray.
Wheal Grenville.
Wheal Grylls.
Wheal Guskus.
Wheal Harriott.
Wheal Harmony.
Wheal Hartley.
Wheal Hawkins.
Wheal Hender.
Wheal Hearle,
Wheal Helen.
Wheal Herman.
Wheal Hope.
Wheal Ida.
Wheal Jane.
Wheal Jewell (Gwen.)
Wheal Jewell (Tavis.)
Wheal Junket
Wheal Kayle.
Wheal Kenneggy.
Wheal Kekewich.
Wheal Kitty (Lelant).
Wheal Lemon.
Wheal Leeds.
Wheal Leisure.
Wheal Louisa.
Wheal Lovell.
Wheal Liberty.
Wheal Ludcott.
Wheal Ludcott and Wrey United.
Wheal Lushington.
Wheal Mary (St. Neot)
Wheal Mary (Perranzabuloe).
Wheal Mary Consols.
Wheal Mary Great Consols.
Wheal Mary Hutchins
Wheal Mary (Lelant).
Wheal Mary (Lanivet).
Wheal Mary (Redruth).
Wheal Mary Ann.
Wheal Mary Florence.
Wheal Margery.
Wheal Margaret.
Wheal Maiden.
Wheal Mitchell.
Wheal Mexico.
Wheal Mount.
Wheal Montague.
Wheal Music.
Wheal Nelson.
Wheal Neptune.
Wheal Norris.
Wheal Ocean.
Wheal Owles.
Wheal Par.
Wheal Prosper.
Wheal Prosper (Brea.)
Wheal Prospidnick.
Wheal Penrose.
Wheal Pink & Clinton.
Wheal Prudence.
Wheal Pollard.
Wheal Polmear.
Wheal Polharmon.
Wheal Pool.
Wheal Ramooth.
Wheal Reen.
Wheel Reeth.
Wheal Rose.
Wheal Rose (alias Pulrose).
Wheal Russell.
Wheal Seton.
Wheal Sicily.
Wheal Sidney.
Wheal Sithney & Carnmeal.
Wheal Sparnon.
Wheal Speedwell(Brea)
Wheal Speedwell (St. Agnes).
Wheal St. Andrew.
Wheal St. Cleer.
Wheal Spinster.
Wheal Squire.
Wheal Squire (Gwen.)
Wheal Tallack.
Wheal Tamar.
Wheal Tehidy.
Wheal Thomas.
Wheal Towan.
Wheal Trannack.
Wheal Treasure.
Wheal Treasury.
Wheal Tremayne.
Wheal Truscott.
Wheal Tryphena.
Wheal Uny.
Wheal Unity Wood.
Wheal Union.
Wheal Unity (Gwin.)
Wheal Unity (Gwen.)
Wheal Venton.
Wheal Veniand.
Wheal Victoria.
Wheal Virgin.
Wheal Vraws.
Wheal View,
Wheal Vyvyian.
Wheal Wallis.
Wheal Wellington.
Wheal William.
Wheal Williams.
Wheal Wrey.
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Original Correspondence.

THE SHROPSHIRE COAL FIELD—No. V.

FORMATION AND DENUDATION OF STRATA.

SIR,—Before proceeding to notice the coal and ironstone seams above the pennystone, it may be well to remark upon the increase which takes place in certain measures in an inverse ratio to each other, as in the case of the pennystone and other measures beneath it. From the list given last week, the strata between the clod coal and the pennystone in the Madeley field appear to have a total thickness of 79 ft., yet these two measures approach each other as we go south till they come within half that distance. This circumstance is the more remarkable from the fact that whilst such measures gradually increase in thickness from north to south, the pennystone increases in thickness from 5 to 30 feet in an opposite direction, an occurrence which may be accounted for by the fact that the former set of strata have a terrestrial and fluviatile character, and are more the result of local causes, whilst the latter had a marine origin, and would, therefore, be the more likely to increase in thickness in proportion to the slope of the basin. It may also be observed that there are seven other seams of ironstone in the South (including the chance pennystone) of a thickness altogether of 40 feet, and that these gradually thin out to 14 feet at Madeley, and, finally, to 3 feet south of Broseley, another indication that the deeper portion of the basin was to the North.

There is one feature which characterises the upper pennystone in the North, which distinguishes it in no other part of the Shropshire field, but which re-appears in South Staffordshire, a feature which appears to be due to the waters in which the pennystone was formed having also contained a certain proportion of lime. It is capped by what is called curl-stone, or cone-within-cone ironstone, which calcined and ground forms a valuable cement for setting under water, and is exported for that purpose. The form assumed by the crystallising process is exceedingly beautiful, and the blocks of stone present the appearance of unexpanded and folded petals. Rounded pebbles of ironstone are often embedded in the hollows of the cones and leaf-looking projections, as though thrown down while the latter were in a soft and yielding state. Before taking final leave of the pennystone, there is another remarkable feature we ought not to fail noticing, after commenting in our last upon the rich variety of organic remains it contains. We find, for instance, that profuse as life was during the accumulation of shale and stone, it ceased for a time as soon as it was complete, through the whole extent of the field; and upon the scattered relics of bones, teeth, scales, and shells, was spread a wide sheet of grit. This curious quartzose gravel covers over an extensive graveyard of perished forms, which stretches south-east and north-east, and is found, indeed, wherever the upper measure is worked. On this platform commences a new state of things; instead of fine silt we have coarse sand. All evidences of animal life disappear, and a profusion of vegetable forms, showing the increased transporting power of water, present themselves. Prolific as the underlying pennystone is in forms representing the old-world fauna, this is no less rich in specimens of its flora. Above the pennystone, and beneath the flint coal, is a rock called the flint coal rock, which varies very much in fineness of grain, thickness, and colour. At Broseley it is white, but highly charged with petroleum in places. At Madeley it is of a yellowish tint, whilst at Ketley it is a deep red colour. At Broseley and Madeley it contains few organic remains, whilst at Ketley it is full of Calamites, Sigilarias, Stigmarias, Lepidodendrons, Ulodendrons, and other specimens of the coal measure flora. These lie in all directions, and at all angles, full grown trees, slender twigs, broken by the storm, or by the force of the current that drove them along. Some have roots attached, and some are of large proportions, being from 5 to 10 ft. in circumference.

Private collections, and the National Museum, Jermyn-street, have been enriched by specimens from this sand rock. Buried at all possible inclinations are full grown trees and slender twigs, matted, twisted, and broken, which had been torn up by the storm, floated by the current, and interred in shifting sand. The character of the carboniferous flora can nowhere be better studied; there is the Sigilaria, with its fluted column, straight and uniform, having at regular stages impressions of its former leaf stalks; the Stigmaria, with its spiral leaflets stretching out into the sand; the Lepidodendron, marked and varied in pattern and design; the Ulodendron, also beautifully scaled; and the Calamites, with joints at intervals, from which started graceful streamers, like its diminutive relative of our own day. On the gentle slopes and round-topped hills of this then young island a gorgeous mantle spread, absorbing from the tropical heat and moisture of a strangely compounded atmosphere above and slimy materials below—by the usual contrivance of tubes, and veins and sap vessels—matter out of which to construct the solid tissues which gave us our present mineral wealth. If the reader asks where these trees grew, we may point to old Silurian hilly ranges which then fringed the basin, like the crescent of high ground now forming the western portion of the present coal country, and where, under conditions of climate such as then existed, a coal-producing vegetation may long have flourished. It is also pretty well understood by geologists that, along a line of country extending from the western hills of Wales into Leicestershire, there was a gradual rising of the land at the close of the Silurian period, where a tropical flora may have flourished, and over a portion of which barrier the sea may have made encroaches.

At a period when land and water were struggling for the mastery, land or air-breathing animals, as may be supposed, were few; but the Shropshire field, like others, has furnished evidence to a certainty that the dark and luxuriant forests which fringed the water's edge were not tenantless. There were no birds like those which now make our woods vocal with their voices, but there was the hum of the beetle and the chirp of the cricket; scorpions with curious tails buzzed about the branches, and reptiles crawled along the slimy banks in search of prey. Nothing more than the bones of these lizard-like animals have been found in the Shropshire coal field, but the discoveries made in others are sufficient to show that several species did exist, some apparently of a much higher order than others.

JOHN RANDALL, F.G.S.

LECTURES AT THE ROYAL SCHOOL OF MINES.

MR. N. ENNOR'S REMARKS ON MR. W. SMYTH'S LECTURES FOR IMPROVING MINING SCIENCE—NO. III.

SIR,—I again, with your permission, proceed with my questions:—

16.—When were the metals formed? Were all metallic substances formed as metals with the world's formation, or were they formed, as a Callington man once publicly told me, that "When God formed a world he made everything, and where it is, there it is?"

Mr. Spargo, in his letter, says that Adam was a miner, but I should doubt it, if he were placed on a smooth world, of all primitive rocks. And if my Callington friend be correct, ores will ultimately work to an end; but I must repeat my belief is that *all* things in creation are living, and either growing or decaying, and that nothing now exists that did not originate from the three gases. These, differently combined, grew and produced every substance. See how trifling is the difference in substance between the voluminous masses of rocks; they are all to be traced back to from six to ten. Again, how slight is the difference between vinegar and sugar, bog turf and timber, and between white quartz and black flint; and I say that all creation varies but little, and originated in the gases. Believing, as I do, that everything is growing or decaying, causes me to go a little out of the way of the metallic department to show fair ground to argue on. I will, therefore, take the oak tree, which begins only with a small seed, and see to what it grows; yet if man were to dig in the earth all his life he would find nothing like timber, or detect anything he could collect and form timber. Adjoining, he will see a beech or an ash quite different in leaf, flower, and wood; but it is timber, and all growing from the same soil, whilst nothing can be detected in the earth by man that he can make like it. Then, observe that trees bear beautiful flowers, and they crystallise, and become fruits: these fruits are all of a different form and taste; may it not, then, be well said that Nature grows, producing all these beautiful things, each varying in form, substance, flower, and fruit, from apparently nothing. But there they are, every one of its kind, each drawing its nutrition from the earth by affinity, in a way unknown to man, who is exercising his intellect to discover how these distinct substances are attracted to the tree's roots, as the tree will often outweigh the soil around it. Then I turn to the roots grown *in* the earth, and select the potato. Here a small root will produce many pounds weight in three months; but you see nothing resembling the potato in the adjoining ground—still it is there, though invisible to the human eye. In this case, also, the earth has produced a crystallised substance of many colours, and to all appearance quite foreign to the earth. If Mr. John Bright were to devise some method to extract this substance from the soil, and produce a potato substitute, I am sure he would cause all the Irish to settle down quite contented.

Then look at the *heads* of *men*. They have hair of all shades and colours, from white to black: they all live on the same substances, but their hair is not composed of the same parts. If we look at the beasts of the field, it will be seen that their hair is often of three or four different colours on the same animal. I think there are but few men who will argue that there has not some different substance crept into the black from the white; but who can detect it in time to prevent its being of two or three colours? It must be admitted by sane men that each of these patches of hair attracted something different to each other patch, from some as yet unknown substance eaten. These patches collect together from affinity. They are in crystalline form and colour, completed by the laws of Nature, without the aid of man, who does not know the governing laws, nor the preventive. To me these things all tend to show that everything is produced from the earth's stratification, where everything is striving to join something else that it has a strong affinity for, and to all appearances forms substances out of nothing, but in reality they are all parts and portions of the first gases.

I will now turn to the mineral formations, and say, without fear of contradiction, that I have seen six-sided quartz grow into fair crystals, 2 inches long, in a very short time, and in various places: they grow up even in levels made by man, and from a base, like plants, grow from the ground. The Great Devon Consols produce thousands of quartz crystals in this way, as do also many other mines I have visited. I have seen in hollows, commonly called vughs, in lodes in the Pentyreglaze Mine white carbonate of lead in five years grow 2 in. long, and not a particle of blue lead near it. I have also seen shales of spathose iron grow on wood swimming in water in mines. If we have proof that these things grow, have we not the basis to work on to come to the conclusion that all metals and minerals grow, like every other thing known?

I believe the globe was formed under the great laws of Nature; the stratifications, through chemical combinations, grow and produce metals, minerals, vegetables; man, beast, and all things seen or known in creation, all grow and are produced under well-defined laws, and will continue to do so. Every man witnesses the *old* decaying and the *new* growing, and all do it in their own element, each requiring its own supply of oxygen. I have always felt satisfied that minerals do not crystallise and settle down in quantity until they meet a full supply of oxygen; consequently, I believe *ores* are only to be found in the outer crust, at a depth of (say) 100 fms. At that depth the *heart* of nearly every deposit is reached that I have seen. I met a man a few days since who had made a large mineral discovery, to whom I made some remarks; in reply he said—"Look at a wood, and you will see casually large trees, and they have deep roots; and large copper deposits near the surface are like them, and will go deeper in the earth than the small ones." This holds good to a certain extent, but large trees do not grow without something congenial about the roots to aid them, neither do large deposits of mineral. What the miner wants to know is what substances rocks should contain to be congenial to the growth of minerals, and what intersections should take place to bring substances to the point that will cause the growth of *ore*, and if there is any seed to be seen about the place. I have seen thousands of places where the seed of copper is visible, but the soil was not congenial, and it made no progress. Too often reports are trumped of the ground being highly mineralised from seeing a little corroded iron oozing out; but it should go for very little, as but few men know the difference between corrode of sulphurous mundic and that of arsenical mundic. It is said that "Mundic rides a good horse," but it must not be arsenical mundic.

[To be continued.] NICHOLAS ENNOR.

MINERAL RESOURCES OF LA PLATA STATES.

SIR,—I notice a letter in the Supplement to last Saturday's Journal, signed "Citizen," calling attention to the vast mineral and other resources of the South American States in a very able manner; at the same time, the writer does not appear to be so well acquainted with the political history of those regions. So far from Brazil wishing to close the River Plate and its tributaries, she is fighting with Paraguay for the free navigation of those waters, and this policy she has advocated ever since the U.S.A. Exploring Expedition, under Lieut. Page, was fired upon by the Paraguayans, in the year 1855—see "Page's La Plata." For the best account of Paraguay and her Japanese-like policy see "Quentin's Paraguay," translated from the French, published by Trübner and Co., London. JOSIAH CHILD.

May 9.

"EXTENSIVE FRAUDS BY A SHAREBROKER."

SIR,—I must beg you to insert a few lines in reply to the very erroneous report of my husband's trial, published in last week's Journal, furnished to you, I have no doubt, by an interested party. As proceedings are being taken which will ensure the real truth being known, I will not go into detail, but I can prove the existence of a gross conspiracy, which shall be exposed. I will only give one instance of the many falsehoods in the report. Mr. Weston is made to say that he was paid 40*l.* in shares for the costs of the Chancery suit. The amount was paid in cash, for which I have the receipt. Every document shown to Major Ross proves that the lease was to be granted to Mr. Davies, for himself and co-shareholders, and it could not have answered any end for Mr. Rabey to have stated that the lease was to be given to him, and I can fearlessly assert he never did say so. The shares were never pressed on Major Ross, but, on the contrary, he was always insisting on having more shares, and was continually coming to our lodgings about them. Mr. Rabey has put the mine to work, and has paid all the costs, no one else having contributed a penny towards it. The prosecution was got up entirely by Mr. Weston, from whom Mr. Rabey has a letter threatening him with the consequences if he disagreed with him. If such proceedings are to be sanctioned there will be no safety in working under a tack-note. Mr. Langford had agreed with Mr. Davies to grant the lease to him without the right to stipulate for other names in the lease, and Mr. Rabey, as purser, was obliged to take proceedings to compel the completion of the lease, in consequence of Mr. Langford's hesitation to sign it, after the draft lease had been returned to him, agreed to by Mr. Davies, and without alteration.

It is a matter which deeply concerns the mining interests of Cornwall, and to them I must look for assistance to expose the injustice which has been committed, and through which my husband is suffering so severe a sentence. The conviction at York was only obtained through the omission of signatures in the cost-book of a mine, which the parties were quite ready to have given, but the Judge held that the defect was fatal. Mr. Rabey suffered for having sold shares in ignorance of their illegality, as hundreds have done before him.

JANE RABEY.

THE LONDON FINANCIAL ASSOCIATION.

SIR,—As the shares of this company seem to be moving upwards, we may conclude that the directors have at last proceeded to take some steps to realise the valuable railway securities they hold; and it would appear advisable, if any change is to be made in the constitution of the company, that they should pursue the course adopted by the General Credit, and divide the 30*l.* share into four shares of 7*l.* 10*s.*, making 160,000 shares instead of 40,000, and discharging the present liability by the realisation of a portion of the securities. The company would then stand on a new footing, without the qualification of any liability; the divided shares would become in greater request with small investors, and the business of the company might be pursued on the same principle as that of the General Credit. As the assets were realised from the sale of the securities the proceeds should be returned by annual instalments to the shareholders, the directors receiving as their remuneration a fixed percentage on the amount. As these securities are of the nominal value of over two millions, it is possible that, by this process, the shareholders would receive back ultimately the greater part of what they have advanced. This seems to be the most feasible proposition which has yet been made, and it would have the double advantage of continuing the business within certain limits, and the gradual return of capital. It is, therefore, to be hoped that before the next meeting, in July, the directors will be able to announce that they are in a condition to carry such a measure into effect.—*May* 13. A LONDON FINANCIAL SHAREHOLDER.

PROCESS FOR COVERING IRON AND STEEL WITH COPPER WITHOUT A BATTERY.—This process, due to Herr Graeger, is described in a recent number of Dr. Boettger's *Polytechnisches Notizblatt*. The objects are first well cleaned, and then painted over with a solution of protochloride of tin, and immediately afterwards with an ammoniacal solution of sulphate of copper. The layer of copper thus produced adheres so firmly to the iron or steel that the different objects can be rubbed and polished with fine chalk without injuring the deposit. The tin solution is prepared with 1 part of crystallised chloride of tin, 2 parts of water, and 2 parts of hydrochloric acid. The copper solution, with 1 part sulphate of copper, 16 parts of water, and ammonia sufficient to re-dissolve the precipitate formed when it is added. Zinc and galvanised iron can be treated, according to Boettger, directly by the copper solution, without using the tin salt. The above process may be found useful by gliders, and for various ornamental purposes.—From the "*Scientific Review*" for May.

THE SOLAR SYSTEM GEOLOGICALLY CONSIDERED—No. I

BY THE AUTHOR OF "ELECTRICAL CONDITION."

The ancients had their multitudes of gods, and the scientific world have their numerous agents, or what they call forces; but if consideration had been given to a series of papers which appeared in the *Mining Journal* of 1849, initialed "S.," on our discoveries in natural philosophy, and to a series of papers published in the Journal during 1851, those forces would never have superseded the then doctrine of the imponderables—heat, light, and electricity.

In a paper read by Dr. Paul before the Society of Arts, on Liquid Fuel, a digest of which appeared in the Journal of April 18, reference is made to the "heat unit," as data of the amount of heat generated by the combustion of various materials; but it is obvious that if there be no such agent as heat all the conclusions must be worthless, however high may be the authorities produced by the Doctor in support of his argument, and we will proceed to test the validity of the heat doctrine on facts.

We are told by the scientific world that if four of sulphuric acid be poured on one of ice there is generated a heat of 212°, but if the proportions be reversed, and one of acid be poured on four of ice, there is a cold of 4° below zero, or a difference of 216°. If to pounded wet loaf sugar strong sulphuric acid be added the mixture blackens, *increases vastly in volume*, and *evolves* a great amount of steam and heat. And if quick lime be sprinkled with water there is disentegration of the lime, evolution of steam, and "generation of heat" beyond estimation.

Heat, we are told, keeps the molecules of matter apart, and its withdrawal suffers them to approach (*nothing* being the cause of "attraction of cohesion"), but in the two last facts there is an immense *evolution* of heat, with a corresponding *increase* of volume, which if the doctrine were right would not be; and combustion itself is alike fatal to the doctrine, since it is accompanied by an enormous increase of volume during the liberation of intense heat.

On reference to the papers above referred to, it will be seen that one of the properties of electricity is that of its being *the bond of union in matter*, and is the cause of crystallisation—is, in fact, associated with cold; "heat" being the evidence of a less amount of electricity than surrounding conditions demand.

William Henry Weekes clearly demonstrated with his electrical kites that the atmosphere was electrical in proportion to distance from the earth; when, then, the position of the Earth to the Sun allows the electricity or cold to descend, it causes the crystallisation of the water, or forms ice, and if the proportion of electricity in the ice be greater than is necessary to effect the combination of the acid and water, the free electricity evolved produces a cold of 4° below zero—the temperature, in fact, of the freezing mixture of ice and salt; but if the proportion of ice be small compared to the acid, or there is a demand for the combining agent, then we have a temperature proportional to the demand, *there being no other agent than electricity.*

Most salts, more especially if highly crystallised, produce cold during their solution, but common salt of tartar raises the temperature of its solvent, and caustic potassa *in a state of dryness* "does the same more remarkably;" and although "heat" causes the air to expand and ascend, carrying with it the "heat," we are seriously told by the scientific world that if a red-hot shot be placed in front of a reflecting mirror, and a bit of tinder in the focus of a second, that it is the "heat" from the red-hot shot that kindles the tinder!

In the papers of 1851 it is shown that the earth was formed as a belt round the equator, and was subsequently broken up by the magnetic north into its present several parts; and in a series of papers addressed to his excellency Mr. Rouland, in 1859-61, while residing in France, it was made apparent that it was so formed in the orbits of Saturn and Jupiter; and when society shall think fit to give Truth a hearing, the difficulties connected with the coal bed formation and other stratifications will disappear.

THE ELECTRIC LIGHT.

Some recent correspondence between the Trinity House and the Board of Trade shows that the electric light at Dungeness can now be worked by either of the two engines, so that no disturbance occurs when one requires repair. The services of the high-class engineers and firemen have been dispensed with, and the Elder Brethren have since been enabled to do that which the connection of the men with the Trades Unions prevented—to have their own ordinary keepers trained to drive the engines, as well as to attend to the lamps, a steady, old experienced keeper being placed at the head of the establishment. The magneto-electric apparatus shown at the Paris Exhibition presented several improvements. The working by either of two machines showed that the power of the light can be duplicated in thick weather; and the engines were utilised for working the pumps of an air fog-trumpet. The electric light was compared with the flash of a first-order revolving oil apparatus belonging to the French authorities, and at 15 miles distance the Trinity House Engineer, Mr. Douglass, estimated the power of the fixed electric light at twice that of the flash of the oil light. The superiority of penetrating power of the electric light in fog was shaken by some experiments made by the Royal Engineers, but it turned out that this result, so different from all other experience, arose from a settlement in the woodwork supporting the electric lens, causing the lens to be out of its present position. Since the alterations made at Dungeness the light there has worked with great regularity and efficiency; and the Elder Brethren have proposed to place similar lights at the South Foreland, Lowestoft, and Souter Point. The Board of Trade approve the extension of this mode of illumination to the South Foreland and Lowestoft, but at present suspend their decision respecting Souter Point. The committee of Elder Brethren who attended at the Paris Exhibition say:—

"As far as the eye is any test, the power of the English fixed light was considerably in excess of the French, and when both machines were in use and there was a good current the fixed beam of the English light did not contrast unfavourably with the revolving one of the French, the flash of which is of great power. The contrast of the electric fixed light with the French first order oil dioptric revolving light was very marked; indeed, the one may be said to put the other out. But the most beautiful feature of the electric was the extraordinary beam it gave. It shone night after night, large, steady, and lustrous as a planet, and you could see in the darkness a beam passing as far as the eye could see. From the tower, with the light at our back, it was very marked, and quite lit the hills round Paris. The whole horizon in the plane of the light showed the white beam, and at the distance of 4 miles it shone upon the windows of some houses, making them appear to be lit up. By extinguishing and re-lighting quickly several times this was very plain. Altogether the light was very remarkable, and the committee are glad to be able to report such an advance as the powers of the light show over that at Dungeness; indeed, the latter gives to the observer no conception of what the present one is, and it is satisfactory to know that the result of five years' work and observation, with imperfect and ill-arranged apparatus, has now borne such good fruit, and that as England was the first to test and adopt this adjunct to the sources of lighthouse illumination, so she still retains her superiority. It is due, however, to Mr. Holmes to say that, great as are the improvements already effected, he states that he is confident he can yet greatly increase the illuminating power before the present apparatus is re-erected at a permanent station."

ORAL INTERCOMMUNICATION BETWEEN PASSENGERS AND GUARD.—Mr. STEPHEN HOLNESS, of Upton Grove, Southgate-road, proposes to place beneath the flooring of each carriage a metal speaking-tube, connected between the carriages by a continuation of India-rubber tubing, coupled with an ordinary screw coupling, forming a line of communication between the guard and driver at either end of the train. The pipe to be supplied at each end with an alarm whistle. He would also furnish each compartment of the carriages with one of his intercommunicators, which will enable the passengers to communicate with the guard or driver through the same pipe. Across the mouth-piece in each carriage he places a small clasp, secured by a seal (that must be broken before the apparatus can be used), which, by being a means of detection of, is, therefore, a security against improper use. He claims that by this arrangement, and at a small cost, may be obtained a most simple and comprehensive system of oral communication from all parts of a train, and the manner of using it is so obvious as to afford no possible obstacle to its being availed of when needed.

COMMUNICATION BETWEEN PASSENGERS AND GUARDS.—During the week the mail and express trains between York and Scarborough have been fitted with the new cord arrangement invented by Mr. George Brown, of the North-Eastern. The trial train was sent down the line last week, and the experiments with that train, and with the passenger trains since, have been very satisfactory. The arrangement is very simple. A cord passes above the door (instead of below it), within reach of any passenger's hand. A pull forward sounds the whistle, and a pull backwards rings the guard's bell; but the cord cannot be used without first springing a semaphore signal indicator from the side of the train at the part where it is in request. This signal locks itself, and cannot be put back except by the guard. The company intend to fit the arrangement to their summer expresses to Scarborough, and it seems likely that the plan will come into general use.

MR. ALBERT GRANT, M.P., has been created a Baron by the King of Italy, in testimony of the services he has rendered to the Italian kingdom, as president of the City of Milan Improvement Company.

Meetings of Public Companies.

THE DEVONSHIRE GREAT CONSOLIDATED COPPER MINING COMPANY.

At the twenty-fourth annual general meeting of the shareholders of this company, held at the offices, 134, Gresham House, Old Broad-street, on Tuesday, May 14—Mr. W. A. THOMAS in the chair—the following report of the directors was read:—

The operations of the company have been so uniform and so similar to those of former periods that little opportunity is afforded for comment. It will be perceived on comparing the present with last year's accounts that the quantity of ore raised has been less by about 1300 tons, and the quantity of fine copper contained in the ore about 106 tons less; the price, however, obtained for it having been 5*l.* 7*s.* 2d. per ton of fine copper more, and the total expenses 3200*l.* less, the directors have been enabled to declare the same amount of dividends—40,960*l.*, which, considering the unabated depressed state of the mining and metal markets, must be admitted to be matter for congratulation. The erection of the reduction and arsenic works mentioned in last year's report are sufficiently advanced as to be capable of producing 50 tons of arsenic per month, having cost 1382*l.* These works must be considerably enlarged so as to keep pace with the accumulation of halvans consequent on raising 20,000 tons of ore annually for the market. The directors are making due enquiry as to the best market for the arsenic, and feel confident that so soon as the superior quality of the article shall become known it will command a remunerative price. For information respecting the present condition of the mines themselves, the directors beg to refer to Capt. James Richards's comprehensive report, by which it is shown that, notwithstanding the enormous quantity of ore sampled, the discoveries have nearly equalled the production. No other applications for directors having been made, those whose period of office terminates this day offer themselves for re-election. The auditors are willing to resume their duties if re-elected.

Account of Income and Expenditure of The Devonshire Great Consolidated Copper Mining Company from March 1, 1867, to Feb. 29, 1868.

DR.	INCOME.		
Balance from last account	£	11,837	18 9
Carriage of ore, outstanding per last account, since received		113	1 8
Sales of copper ore sampled from Jan. to Dec., 1867, both months inclusive—20,405 tons 16 cwts. 2 qrs., realising £95,602 13 0			
Deduct carriage, outstanding Feb. 29, 1868 ..... 167 16 0=		95,434	17 0
Ochre sold		18	18 3
Fees on transfers of shares		7	13 0
Interest on money lent		79	2 11
Interest on Exchequer Bills		172	1 8
Landlord's property tax deducted from dues on copper ores		158	8 1
Total	£	107,822	1 4

CR.	EXPENDITURE.		
Mines' cost, from Feb. to Dec., 1867, both months inclusive	£	37,822	17 11
Timber imported		825	15 9
Water rent—one year to September 29, 1867		452	6 8
Tamar Fishery—one year to September 29, 1867		51	8 4
Rates and taxes paid at Tavistock		1,265	1 11
Income tax—one year to December 29, 1867		1,336	3 6
Dues on copper ores sold, from January to December, 1867, both months inclusive		7,728	12 6
Grant voted May 14, 1867, for the promotion of the education of the miners' children, and for other charitable purposes at Tavistock		100	0 0
Compensation to resident director, one year, to Dec. 31, 1867		600	0 0
Compensation to directors and auditors, voted May 14, 1867		442	0 0
Office expenses and salaries in London		791	1 1
Dividends paid, 40*l.* per share, on 1024 shares		40,960	0 0
Reduction works		1,382	4 6
Balance—Cash at the bankers, 1156*l.* 15*s.* 5d.; cash and stamps in the office, 25*l.* 1*s.* 9d.; cash at Tavistock, 200*l.*; money at interest on call, 5172*l.* 1*s.* 8d.; bills receivable, 7510*l.* 10*s.* 4d...		14,064	9 2
Total	£	107,822	1 4
Balance brought down ..... £14,064 9*s.* 2d.			

The balance-sheet of liabilities and assets of the company, to Feb. 29, 1868, shows a balance of assets over liabilities of 101,309*l.* 4*s.* 9d.

Extracts from Capt. James Richards' report on the mines were also read, by which it appears the reserves of ore in the mines amount to 64,620 tons.

The usual resolutions were passed, receiving and adopting the report and accounts, and re-electing the directors and auditors, and, after passing a vote of thanks to the Chairman, the meeting separated.

YUDANAMUTANA COPPER MINING COMPANY OF SOUTH AUSTRALIA.

The sixth annual general meeting of shareholders was held at the City Terminus Hotel, on Tuesday,

Mr. HENRY HILLS in the chair.

The notice convening the meeting was read.

The report of the directors stated that sales of copper and ore for the year ending Feb. 5, 1867, amounted to 6551*l.* 17*s.* 2d., whereas on the present occasion the directors have the satisfaction to report that the sales of copper and ore to March 31 of the present year, embracing a period of little more than six weeks in addition to the usual financial year, have realised no less than 31,786*l.* 1*s.* 8d., while the general expenditure in the colony for the year ending Nov. 30, 1867, amounted to 22,051*l.* 4*s.* 4d. This, moreover, does not include the great reduction which has been recently effected in the working expenses, which only came into operation during the latter part of the year—so that, in future, the saving will, it is believed, amount to upwards of 5000*l.* a-year. With regard to the loan account, on Nov. 30, 4563*l.* 14*s.* had been paid on account of Mr. Martin's 7000*l.* loan and interest thereon, but since that time vouchers have been received in London for the additional payment of 2500*l.* The Blinman Mine (which alone is being worked) is in a highly satisfactory condition, and the ore in sight increases proportionately with the workings. On Nov. 30, 1867, the ore at pile was computed at 13,185 units of copper, while the reserves at the same date are represented as "apparently undiminished since last return of November, 1866;" in fact, more ground has been laid open. Capt. Terrel reports, under date Jan. 27, 1868, "there is twice the quantity of ore in sight now than when I first took the management, on Sept. 1, 1867." The smelting operations likewise continue to progress. During the year ending Feb. 5, 1866, the copper made was 103 tons, while the quantity produced in the twelve months ending Nov. 30, 1867, was 376 tons, or an average of about 31 tons per month; but since that period the monthly average has increased to about 45 tons. The supply of fire-wood continues ample, and the ordinary means of cartage to Port Augusta is sufficient to meet the requirements of the mine. The Government of South Australia has, however, passed an Act to authorise individuals or a company to construct 200 miles of railway north of Port Augusta, with a guaranteed interest of 5 per cent. on the capital embarked, and action has already been taken in the matter by parties at Adelaide advertising for tenders for the survey of the line. The formation of this line will materially promote the interests of this company. The Colonial Legislature has remitted the rents of the mines for two years further, making it altogether five to seven years from January, 1867, according to their respective distances from Port Augusta, in consequence of the disastrous effects of the recent drought in retarding the progress of this and other kindred companies.

The CHAIRMAN said he did not know that he could have any information to communicate additional to that contained in the report. In accordance with special instructions sent out to the colony by the directors, a profit and loss account had been sent them, which was appended to the accounts. As to the present position of the company, he might state that Mr. Martin's visit to the mines had certainly been productive of very beneficial results, as he had effected very considerable reduction in the salaries of the officials, and also in the general scale of wages, and the smelting expenses had been put upon a much more satisfactory footing; that department was now carried on by contract—that is, so much was paid for every ton of fine metal produced; and by the improved arrangement under the new management a much larger quantity of ore was being raised, while the reserves of ore were not reduced, if, indeed, they had not been increased. It was not too much to say that the prospects of the mine improved as its development progressed. In the smelting a very considerable improvement had been effected, the quantity of copper made during the twelve months ending November last having been nearly four times as much as during the year ending February, 1866—in other words, 376 tons, against 103 tons. That had been the produce of the working of about two furnaces throughout the year; but since November the "make" had been about 45 tons per month, each one of the three furnaces having produced monthly between 14 and 15 tons. In connection with the furnaces, one very important fact was that they had been able to make good fire-bricks from the clay upon the spot, which were being used in the construction of a fourth furnace. Wood was being supplied in ample quantities, and the superintendent had informed them that the Government, in consideration of the losses sustained by the several mines, in consequence of the severe drought, had remitted the rentals, and, therefore, they would have no rent to pay for a long time to come. The Bill had received the sanction of the Colonial Assembly for the construction of the long-talked-of railway, and had guaranteed 5 per cent. interest upon the outlay, but whether that would be sufficient to induce parties to subscribe the necessary capital he could not say—had the Government given 6 per cent. there would have been no difficulty about it. That railway would prove of very great advantage to the Blinman Mine, but of still greater to the Yudanamutana, which was situated so much further north. He was also glad to be able to inform the shareholders that the copper market was improving from its extreme point of depression, Chili now being worth 77*l.* per ton, which was equal to the average of the unrefined Blinman metal, and that in July last was selling at 65*l.* per ton; 8*l.* or 10*l.* per ton in the price of fine metal would make a very considerable difference in the result of their operations. Taking all circumstances into consideration—that their "make" of copper was increasing, that its price was improving, that the expenditure had been much reduced, and that the liabilities of the company had been cleared off—there was certainly reason to hope that for the future satisfactory profits will be realised. (Hear, hear.) He might add that the benefit of the reduction in wages effected by Mr. Martin had not been felt at the date up to which the accounts were included—in fact, the reduced scale did not commence until November, and the benefit would be seen presently. All the copper made during the last seven or eight months had been sold in the colony, which obviated much trouble, and saved expense. (Hear, hear.) He moved that the report be received and adopted.——Mr. TURNLEY seconded the proposition.

Mr. C. J. HILL was much pleased to see the improved balance-sheet, and he endorsed the anticipations of the Chairman as to the encouraging prospects of the company. He was quite at a loss, however, to understand why the Yudanamutana Mines, which it was admitted on all hands was a very valuable property, should be allowed to remain idle.——The CHAIRMAN explained that the Yudanamutana was situated some 100 miles further north than the Blinman, and the truth was, the directors did not at present possess sufficient capital to work the two mines. Presently, when the Blinman had enabled them to accumulate a sufficient sum to construct two or three furnaces at Yudanamutana, where there was plenty of wood for fuel, the development of that property would be proceeded with.

Mr. C. J. HILL suggested that a tabulated *resumé* of the result of the operations should be furnished to the proprietors every half-year.——The CHAIRMAN said that all these details were always open to the shareholders at the office; but there could be no objection to the adoption of the suggestion. He further stated that the only liability outstanding at the date of the accounts was 1900*l.*, which no doubt by this time had been worked off.

A SHAREHOLDER asked if it would be advisable to separate the two mines?

The CHAIRMAN said he did not at all despair of the Blinman not only paying good dividends to the shareholders, but also of providing capital sufficient to work the Yudanamutana, which could be done in a very rapid and inexpensive manner. If the Blinman continued to give them 50 tons of copper per month, they ought not to be long accumulating sufficient capital to erect two or three furnaces at Yudanamutana.

Mr. BROMFIELD believed that they possessed a sufficiently good property in the Blinman, and, therefore, in order that they might not be led into temptation, he would suggest that they should dispose of the Yudanamutana for a certain amount of money, and upon a defined royalty. He could not see why they should not have a dividend in six months hence, seeing that during the last working year they had paid off a debt of 5000*l.*, and increased the balance at their bankers.——The CHAIRMAN said the Yudanamutana was the more valuable property of the two, and when the railway was completed would, no doubt, be a highly profitable mine.

Mr. PARR stated that the whole of Mr. Martin's 7000*l.* loan had been paid off.

Mr. SALMON, referring to the suggestion as to the disposing of the Yudanamutana Mine, stated that it would be selling the very Hamlet out of the play. Valuable as was the Blinman, the Yudanamutana was admittedly much the richer mine of the two—indeed, the richest mine in the colony. They had always been told that the railway would never be made, but they now found it was to be made. He did not say it was going to be made for mineral purposes alone, because it would also be an agricultural line. There was a large wool trade in that district, and a similar drought to the last, without the assistance of a railway, would be simple destruction to the colony. As the Chairman had informed them, the Bill had been passed, and the guarantee fixed; and he had seen an advertisement in the colonial papers for tenders to make the survey. It was unlike some countries where railways had to be made, for the whole line was along a comparatively level surface, and there were no rights of land to purchase. If they got the railway to (say) half-way up to the Blinman Mine—which might be accomplished within the next 18 months, it would have a great effect upon that property, and it would then answer their purpose to send the ore down without smelting it. They were now getting out of the Blinman Mine all the ore they wanted, but when the railway had been thus far completed they would not be content with the present yield, and there was no reason why they should not have ten times as much. As to the payment of a dividend, no one had a deeper interest in that desirable point being arrived at than the directors, each of whom held a large interest in the company. Shareholders would at once see the importance of finding clay near the Blinman Mine, when he stated that it had cost them 17*l.* per thousand to carry the bricks up to Port Augusta; and it was even of greater importance to find that the bricks made with that clay proved themselves superior to the best Stourbridge bricks. He hoped also that shareholders were now perfectly satisfied there would be no difficulty about fuel, for any quantity could be obtained at 11*s.* per ton the outside. Their present stock amounted to some 3000 or 4000 tons, and it was still coming in. And, supposing, as, indeed, it had been supposed, that the timber would some day be exhausted, that could not possibly take place before the railway was completed up to the Blinman Mine; and then if they could get no more wood—which was most improbable—it would be of no consequence, because the mine would be sufficiently rich to make it very well answer their purpose to send away the ore, but not to this country, because a large demand existed for it in the colony. He had no hesitation in saying that he believed they had now turned the corner, and that their future was much brighter than it had been during any previous period of the company's history. (Hear, hear.)

The motion adopting the report and balance-sheet was put and carried unanimously. The retiring directors (Messrs. Hills and Humby) were unanimously re-elected. Mr. Freese was re-appointed auditor.

A vote of thanks to the Chairman and directors terminated the proceedings.

NATIONAL PROVINCIAL BANK OF ENGLAND.

The annual meeting of shareholders was held at the head office of the bank, Bishopsgate-street, on Thursday,

Mr. RICHARD BLANEY WADE in the chair.

Mr. EDWARD ATKINSON (general manager) read the notice convening the meeting.

The CHAIRMAN said it became his duty to make a few observations upon the result of the working of the bank during the past year. If ever there was a perfect contrast between two years it was that of 1866 and 1867. In 1866 they had a high Bank rate, and great disquietude in commercial circles, but in 1867 there was everything the reverse in every particular—great depression in all commercial matters, and a very low rate of money; iron, copper, and every article extensively used in this country having been in a state of prostration; but, nevertheless, a large amount of sound business was transacted. The home trade was fairly prosperous, and the exports, although not equal to some preceding years, yet showed a considerable amount of activity in the different manufacturing districts. It, therefore, came to pass that, notwithstanding a want of confidence having been spoken of, a very considerable business was transacted by the National Provincial Bank; indeed, at their large branches increased business was done, and many new accounts were opened, as might be judged from the results of the year's working, which the board might fairly hope would be satisfactory to the proprietors—(hear, hear)—and the more especially when the very great difference in the value of money was considered, in 1866 the average of the Bank rate having been 6*l.* 18*s.* per cent., while in 1867 it had not exceeded 2*l.* 11*s.* It was only due to those gentlemen who represented them in the country—their country managers—to say they had well carried out their large business with entire satisfaction. Proprietors were aware that for some time past it had been the policy of the board, except under certain circumstances, to confine their operations to districts already occupied by the bank. Pursuant to that policy negociations were carried successfully through for the transfer of Messrs. Bailey and Co.'s business to this bank. The branch of Messrs. Bailey and Co.'s bank lay in the very heart of the district occupied by the National Provincial Bank, and, therefore, the board thought that by the transfer of Messrs. Bailey's business their influence would be increased in the district and in the surrounding localities. Since the transfer was made the business had increased, and there was every reason to believe that it would continue to satisfactorily progress. At all the other branches the progress made was eminently successful—a great number of new accounts had been opened, and the general London business was developing in a manner which quite confirmed the board in the wisdom of the step recommended to be taken some time since—to commence business in London; and he was quite sure that only time was required to make their London branch a very important portion of the general business of the bank. (Hear, hear.) It was almost unnecessary to say their general managers, Mr. Robertson and Mr. Atkinson, had given that same assistance to the board which he mentioned on the last occasion they had done during the preceding year. It was now five years since those gentlemen undertook the management, upon the retirement of their old friend, Mr. Daniel Robertson. During that period they had passed through events as important in the career of their institution as at any preceding time. During that period they had relinquished their issues, they had gone through a violent panic, and they had organised a constitution for the conduct of their London business, which had thrown a great amount of additional trouble and labour on those gentlemen. He hesitated not to say that it would be impossible to have two gentlemen who could have discharged with such perfect satisfaction and efficiency the onerous and important duties which had been entailed upon them. (Hear, hear.) The time came to all when it was necessary to retire from the very active duties of life, and during last year the board heard with very sincere regret that Mr. Robertson had intimated his desire to be relieved from the onerous duties of general manager. Their old and respected friend continued to look so young, and showed such energy and activity in the conduct of the business, that they had almost come to the conclusion that he would never grow old, or become weary of work. No matter what the perplexity or difficulty, their friend always rose equal to the occasion, for Mr. Robertson possessed great qualifications and capabilities; but, at the same time, they had no right to press Mr. Robertson, after having so faithfully and efficiently discharged his duties for a period of 33 years, to go on labouring till he was positively incapacitated by illness. Therefore the board, however reluctantly, accepted his resignation, but at the same time unanimously expressed a desire that he should be appointed a director of the bank. The board had selected Mr. Holt, who had been for thirty years in the service of the bank, having acted as chief inspector, and who was thoroughly well acquainted with all the details and history of the business, as the coadjutor of their tried friend, Mr. Atkinson. Since then an unexpected vacancy had occurred among them by the lamentable death of Mr. Laurie, who had been a director of the bank many years, and occupied the chair which he (Mr. Wade) now so unworthily filled. Mr. Laurie was a man of character, ability, and possessed a great capacity for business—in all respects he was a most valuable director. At an early period in the history of the bank Mr. Laurie threw his fortune into it, and never doubted that it would prove a progressively prosperous institution. (Hear, hear.) The bank had lost a most able director, and the directors had lost a most sincere friend, with whom it was a great pleasure to be associated. (Hear, hear.) Upon Mr. Laurie's death it was suggested that Mr. A. Robertson should offer himself to the shareholders to fill the vacancy thus created, and the board had no doubt it would be the pleasure of the meeting to elect Mr. Robertson, for in him they would have the assistance of a man of large experience and great ability. (Hear, hear.) The accounts had been made up in the same form as that adopted last year, and which was so much approved by the shareholders. Those accounts also showed the very admirable position the bank had attained. But satisfactory as was its position, and great as had been the success, he believed as time passed away they would find its business and its position develope in a way that could hardly be anticipated; in all respects, however, he thought its present position was such as could not fail to be satisfactory to every shareholder. (Hear, hear.) He would now proceed (as was their custom) to read the report:—

In presenting to the proprietors their thirty-fifth annual report the directors trust that, notwithstanding the long-continued prostration of trade, the results of the year will prove satisfactory. The panic which commenced in May, 1866, occasioned a severe fall in the value of all securities and a depression in the trade of the country which for extent and duration have been almost without a parallel. The deficient harvest of 1866 tended materially to increase the evil, and added to the difficulties of the manufacturing and working classes. On the 1st January, 1867, the Bank rate for money was 3*l.* 10*s.* per cent., but by three successive steps the rate was reduced to 2 per cent. on the 25th July, at which it has ever since remained. The average value of money for the year was 2*l.* 10*s.* 9d., against 6*l.* 18*s.* in 1866. Owing to the low value of money the profits of the past year were necessarily less than in the previous year; but, notwithstanding these adverse circumstances, the progress of the bank has been steady and continuous. The shareholders were last year informed that the great and important measure of carrying on the business of bankers in London, as well as in the country, had been accomplished with most satisfactory results, and the directors have again, at the end of a second year, to report that the new branch of business has greatly enhanced the standing and prosperity of the bank.

The following statement shows the result of the year's operations:—

Jan. 1, 1867.—Rest or undivided profits, Dec. 31, 1866, as exhibited at the annual meeting in May, 1867	£	347,586	11 5
Less bonus declared and paid in cash in July, 1867		97,200	0 0
Leaving	£	250,386	11 5
Dec. 31, 1867.—Net profits of 1867, after making allowance for bad and doubtful debts, and bonus of 10 per cent. to officers		226,119	11 9
Making	£	476,506	3 2
Add undivided profits from 1866		20,000	0 0
Deduct—Total	£	496,506	3 2
Dividend on company's stock, paid July, 1867 ... £43,200 0 0			
" " January, 1868 43,200 0 0			
Bonus of 6 per cent., paid January, 1868 ..... 64,800 0 0			
Undivided profits to next year ..... 10,000 0 0=		161,200	0 0
Leaving	£	335,306	3 2
Out of these profits the directors propose to declare, in addition to the foregoing dividends and bonus paid to proprietors, as above stated, a further bonus of 7 per cent. in July next, making a division of profits in 1867, in all, 21 per cent. upon the paid-up capital, free of income tax, amounting to		75,600	0 0
Leaving reserve, invested in Government securities..	£	259,706	3 2

The directors have much pleasure in informing the proprietors that they completed a negociation in January last for the acquisition of the old and highly respectable bank of Messrs. Crawshay Bailey and Co., at Newport, Monmouth, and Abergavenny, under arrangements highly beneficial to this establishment. Mr. Crawshay Bailey, from his advanced years, felt desirous of curtailing his business engagements, but he and his late partner, Mr. Gratrex, at Newport, will continue for a time to give the benefit of their services as local directors at these places. The directors take this opportunity of tendering their best thanks to the numerous customers of Messrs. Bailey's bank, for the ready and cordial support which almost without exception they have given to the National Provincial Bank on the transfer. The directors in their report in May, 1866, stated the hardship imposed upon the bank of relinquishing its right of issue, without receiving the compensation they relied upon having under the provisions of the Act of 1844, but they expressed their hope that the equity of their case would yet receive due consideration. They have, therefore, drawn up a memorial reciting the whole facts of the case, which has been submitted to Her Majesty's Government, and which they trust will be favourably entertained.

It is with feelings of deep regret that the directors have to announce to the proprietors the death of John Minet Laurie, Esq., who for a period of nearly 20 years presided at the annual meetings of the bank. By this event the directors have lost an able and esteemed colleague, and the bank one of its best supporters. The directors have also to announce, with much regret, the retirement of Mr. Alexander Robertson from the position of joint general manager, in consequence of his general health requiring greater rest, after a period of upwards of 33 years' service in the bank. The directors have recognised Mr. Robertson's long and able services by awarding him a liberal retiring allowance, and by unanimously inviting him to become a candidate for the seat in the direction vacant by the death of Mr. Laurie. Mr. Robertson, being duly qualified, has offered himself as a candidate, and, if elected, the directors hope to secure to the bank the benefit of his banking experience for many years to come. The directors have appointed Mr. William Holt to be joint general manager with Mr. Edward Atkinson, now senior officer. Mr. Holt entered the bank's employment in the year 1835, and for many years served the bank most efficiently as an inspector of branches, more recently as chief inspector of branches, and for the last two years as City manager, and the directors believe that they have selected a highly valuable and efficient officer as successor to Mr. Robertson.

Annexed is an abstract showing the liabilities and assets of the bank on Dec. 31.

DR.—Paid-up capital	LIABILITIES.	£	1,080,000	0 0
Amount due by the bank on deposits			13,604,180	2 3
Acceptances			350,008	15 3
Reserve fund, Jan. 1, 1867 ..... £250,386 11 5				
Addition, Dec. 31 last..... 9,319 11 9=			259,706	3 2
Profit and loss balance			85,600	0 0
Total		£	15,379,495	0 8

CR.—Cash in hand—at Bank of England and branches, call and short notice	ASSETS.	£	2,058,403	18 4
Government securities			2,524,688	14 9
Other securities, debentures, &c.			1,178,278	9 11
Bills discounted, loans, &c.			9,330,069	8 1
Freehold premises, &c., in London and country—total amount £358,237 0 1				
Less, at credit of building fund ..... 70,182 10 6=			288,054	9 7
Total		£	15,379,495	0 8

The CHAIRMAN then moved that the report be received and adopted.——Mr. J. O. HANSON begged to second the proposition.

Mr. REEVE was glad to find that they were likely still to have the benefit of Mr. Robertson's experience. During his long servitude he had won for himself the respect and esteem of all with whom he had been associated. (Hear, hear.) He could not help congratulating the board upon the appointment of Mr. Wells, for a better selection could not have been made to the office of manager of the City branch.

The CHAIRMAN, replying to different questions, stated that he was glad to find the appointment of Mr. Wells had given satisfaction. As to the interest on the reserve fund, that was added to the general receipts of the bank; and as to the amount of the reserve fund, the custom had been to add to it year by year, which had always met every circumstance; but the directors would be very glad to see it grow considerably larger. As regards the inspection of branches, that was a subject always uppermost in the minds of the directors, and during last year the number of inspectors had been increased, so as, if possible, to render that department more efficient. He thought he might say that nearly every branch had during the year undergone inspection, and the results, upon the whole, were satisfactory. As to the reserve fund, he should have reminded hon. proprietors that some time since a considerable amount was taken from that fund and added to capital; and that was one reason why that fund was not now so large as some might wish to see it. But it was only a matter of time to see it of the amount that would be perfectly satisfactory to every hon. proprietor. (Hear, hear.)

The report was carried unanimously.

Mr. REEVE then proposed a resolution appreciative of the valuable services rendered to the bank by the late Mr. Laurie, and expressive of condolence and sympathy with his family. The motion having been duly seconded,

The CHAIRMAN said the board of directors had passed a resolution of a similar kind, and transmitted it to Mrs. Laurie.

The resolution was then put, and carried unanimously.

Mr. BAILEY, as the only representative of his uncle present, thanked the proprietors on behalf of the family for the vote just passed. He was sure that it would be a source of great comfort to Mrs. Laurie.

The retiring directors were re-elected.

The Hon. ELLIOT THOMAS YORKE thanked the proprietors on behalf of the re-elected directors, and in doing so stated that there were motives other than the large stake they had in the bank which prompted the directors to use their utmost endeavours to further the prosperity of the institution. It was their great pride to be associated with its strength and its usefulness, and their boast was that they commanded public confidence. (Hear, hear.) These were times of mistrust—it was a progressive and an analytical age—when the secrets of banking no longer remained a mystery, the guiding principles being nothing more nor less than honesty, prudence, and liberality. These were the principles which had enabled the directors of the National Provincial Bank to pay to the shareholders in nine years 1,400,000*l.* in dividends and bonuses—a sum much more than the capital of the bank. (Hear, hear.)

The CHAIRMAN said the next business was to fill up the vacancy created by the death of Mr. Laurie, and it was his most agreeable duty to propose the name of Mr. Alexander Robertson.——Mr. H. PAULL, M.P., had much pleasure in seconding the proposition, which was put and carried unanimously.

Mr. ROBERTSON acknowledged the resolution, by remarking that he deeply felt the appreciation which had been shown of the services he had rendered during the last 33 years.——Mr. CREAK proposed that the best and warmest thanks of the proprietors be presented to the board of directors for their continued successful management of the affairs of the bank, which, being seconded, was put and carried with acclamation.

The CHAIRMAN, on behalf of himself and colleagues, returned thanks for the unanimous manner in which the proprietors had passed this vote in acknowledgment of the services of the board during the past year. It was the custom to look upon these votes as a matter of course, but he could assure the meeting that the directors, one and all, fully appreciated this expression of confidence. (Hear, hear.) As to the future, their best efforts would be used to pursue the policy that had brought such success. They had no new principle to enunciate, but would merely keep in the beaten track they had so long pursued. (Hear.)

A hon. PROPRIETOR said they had one duty to perform before they separated, and that was to accord their best thanks to Messrs. Atkinson and Holt (the general managers of the bank), to the country managers, and to the staff, for their efficient services during the past year.——Mr. PEARS seconded the proposition, which was carried unanimously.

Mr. ATKINSON acknowledged the vote, stating that as each officer was selected for his position according to his merit and qualification, every department of the bank's business was efficiently discharged. The result was shown in the dividend declared, which had been legitimately earned, and, as would be seen by the balance-sheet, without touching the large reserves. With regard to these reserves—of having them always large in amount and readily available,—he trusted that the principle hitherto adopted would continue to be the ruling principle of the board. (Hear, hear.) He could not refrain from taking the present opportunity to state that proprietors had it in their power to add much to the prosperity of the establishment, for if everyone would only do business with the bank in the course of the coming year, and each were to bring but one new account, a splendid result would be shown at the next annual meeting (Hear, hear.) He again thanked the proprietors for the unanimous vote in appreciation of the services of the employees of the bank.

The meeting then separated.

SCOTTISH AUSTRALIAN MINING COMPANY.

The half-yearly general meeting of shareholders was held at the London Tavern, yesterday,—Mr. A. W. YOUNG in the chair.

The notice convening the meeting was read.

The report stated that the quantity of coal raised and sold from Lambton Colliery during the six months ending Dec. 31, 1867, was 93,601 tons, as against 80,172 tons in the corresponding period of 1866, while for the whole year 1867 the quantity was 178,751 tons, being a monthly average of 14,896 tons. From Jan. 1, 1867, to the close of the year, the price charged for

large coal sold by this company, and (with two partial exceptions) by the other principal colliery owners in the colony, was 9s. 3d. per ton, put on board ship at the port of Newcastle; but in consequence of certain contracts which had been entered into in 1866, at 8s. 3d. per ton, extending over all last year, 12,518 tons included in the above-mentioned total quantity, sold by this company during the last half of the past year, realised only that lower rate. The nett profit from the colliery (including 102*l.* 2s. of rent of cottages on the Lambton Township, and 14*l.* 12s. of interest, together 116*l.* 14s., received), after writing off the sum of 1624*l.* 2s. 10d., to meet wear and tear, and adding 500*l.* to the "casualty reserve fund," &c., was 9633*l.* 18s. 4d.

The CHAIRMAN, after remarking upon various items in the report, proposed that the report of the directors be received and adopted, and that a dividend at the rate of 8 per cent. per annum on the whole capital of the company (120,000*l.*) be declared, the same to be payable, free of income tax, on and after Wednesday, the 27th day of May inst.

The motion was put, and carried unanimously.

Mr. Alexander Lang Elder was re-elected director, and Mr. Charles Whetham was re-appointed an auditor.

The meeting was then made special, to increase the capital of the company; and after the advertisement notice convening the meeting had been read by the SECRETARY, a resolution was proposed, seconded, and carried creating 30,000 new shares of 1*l.* sterling each, such shares to be offered at par, and *pro rata* to the existing shareholders, 2s. 6d. per share to be payable on July 1, and a like sum on Nov. 2 next, the holders thereof to be entitled to participate in all profits earned by the company after June 30, 1868.

A vote of thanks to the Chairman terminated the proceedings.

ANGLO-ITALIAN MINING COMPANY.

The ordinary general meeting of shareholders was held at the London Tavern, Bishopsgate, on Thursday,

Mr. HENRY HAYMEN in the chair.

Mr. JOHN E. DAWSON (the secretary) read the notice convening the meeting, and the report and accounts were then submitted.

The directors' report states that shortly after the extraordinary meeting, in November, Mr. Pearson Morrison proceeded to Italy and commenced the examination of several of the properties which had been offered to the company. Considerable delay, was unfortunately, occasioned by the winter season; but, notwithstanding a number of properties have now been examined, others are still being tested, and from advices lately received, confirmed by letters to hand on the 4th inst., hopes are confidently entertained that a satisfactory basis of operations will very shortly be secured. The delay which has occurred, although it was unavoidable, has naturally caused the directors some degree of anxiety, yet in so important a question as the purchase of a property the interests of the shareholders demand that the utmost caution should be used, and it has accordingly been thought desirable to defer the completion of any purchase until the fullest examination has been made. The directors gladly avail themselves of the opportunity of recording their appreciation of the energy and care exhibited by Mr. Morrison in the face of very many difficulties. The examinations which have already been made of some of the properties under offer to the company fully convince the directors that there is abundant opportunity for the profitable employment of capital, and they have every confidence in stating that the patience already shown by the proprietors will ere long be rewarded by satisfactory results.

The CHAIRMAN observed that last year they were unanimously of opinion that it was desirable to send out Mr. Pearson Morrison to inspect certain properties which were offered to the company. Mr. Morrison, unfortunately, arrived in Italy when the snow was on the ground, and considerable delay had in consequence taken place. As was stated in the report, they had had some valuable property offered to them, but until Mr. Morrison had ascertained that it was as free from risk as mining property could be they had not concluded any purchase. He was glad, however, to say that since the report had been prepared they had received samples of mineral from Italy, which upon being assayed had given extraordinary results. He would remark that, although at present they had no property, they had spent less money than would have been expended by many companies in preliminary expenses. The directors were largely interested, pecuniarily, in the welfare of the company, and he hoped that by the time they next met they would be enabled to obtain good results for them. He concluded by moving the reception and adoption of the report and accounts.

Major-Gen. DOWNING seconded the resolution, which was carried unanimously.

Messrs. Quilter, Ball, and Co. were unanimously re-appointed auditors; and thanks having been voted to the Chairman and directors, the proceedings terminated.

NEW QUEBRADA COMPANY.

The report of the Committee of Conference has been issued. The committee was appointed by a resolution of the general meeting of shareholders, held March 11, "to meet the board for the purpose of looking into the company's affairs." They acknowledge the readiness of the board and of the manager to place every means of information at their disposal; they have also received a full statement of the views of the committee of shareholders, who lately sought to obtain an investigation of the company's affairs, and have been met by two of the contractors, and by other gentlemen. With reference to the mines, the committee state that the shareholders have had such a succession of consistent testimony to the immense value of the mines that the committee need only state that their opinion of the correctness of the anticipations always entertained by them has been confirmed by their enquiry. The latest witness, Mr. Carr, the contractor, who visited the mines only this year, has personally stated to them that he was agreeably surprised, their apparent richness exceeding his expectations. As to the timber and other vegetable products upon the company's property, the committee are amply convinced of the justice of the representations which have been made of the importance of the vegetable productions of the estate as a source of income to the company. Such are the richness of the soil and the stimulating influence of the climate that the contractor's late engineer speaks to having seen three crops grown on the same land within less than nine months. Coffee and tobacco are grown with advantage on the cultivated portions of the neighbouring districts. Besides valuable fibres, and numerous other plants of commercial and medicinal importance, the suitability of the estate for the growth of cotton is shown by a superior quality of that plant being found wild upon it. The forest abounds in magnificent trees of rosewood, mahogany, lignum-vitæ, and other hard and durable woods, and also in dye-woods of great variety.

Relative to the expenses and management, the committee present the following statement:—

Assets received from the old company	£ 558	14	11
Capital paid-up in the new company (calls in arrear, 5484*l.* 17s. 3d., being deducted)	28,583	2	9
Sundry receipts	534	6	7
Liabilities incurred by new company	7,616	10	11
Total	£37,292	15	2
Which is balanced by—			
Payments on liabilities taken over from old company.	£ 1,601	1	4
Expenditure on account of new company, from its formation	29,530	13	6
Cash and other assets, apart from sums due by Mr. Pittar and Messrs. Bird and Hemming	6,161	0	4
Total	£37,292	15	2
The expenditure on the company's account in completing and maintaining portions of the railway and works has been	£ 2,226	18	9
The contractors have been paid, in cash, goods supplied, and debentures reckoned at 70 per cent.	7,749	17	6
Plant has been paid for by the company and sent over	6,980	17	0
Total	£16,957	13	3
Add loss by discount on debentures	990	0	0
Total expenditure on railway and works..	£17,947	13	3
The rails remain in hand for the further purposes of the company.			
The important item of survey and engineering expenses includes, among other payments, the salaries of Mr. Matthews, C.E., the resident manager, at the rate of £800 a-year	£ 1,146	13	4
Mr. Mullings, accountant, an important officer, at the rate of of £500 a-year	435	16	10
Mr. Wright, engineer-in-chief, at 500 guineas a-year..	393	15	0

In conclusion, the committee urge the shareholders to remember that their true object is to effect an early and secure communication with the mines; that to them "time is money," and money provided in sufficient amount, under a judicious plan, and properly spent, cannot fail to make them an enormous return. The company has the support of the Government of Venezuela, who have granted them immunity from Customs' duties on stores imported, and from claims of military service on labourers. The railway will open up a tract of country of surpassing fertility, will materially assist in developing an important and lucrative business in timber, and will give the company access to mines considered to rank amongst the richest in the world.

SHAREHOLDERS' LIABILITY.—Purdey's case, in *re* the West London Wharves and Warehouses Company (Limited), was heard by the Master of the Rolls, upon application to remove the shareholder's name from the list of contributories. The company's special Act provided, "that it should not be lawful for the company to issue any share, nor should any share vest in the purchaser, unless and until a sum not less than one-fifth of the share should have been paid up." The company was afterwards registered under the Companies Act, 1862, and ordered to be wound-up under supervision. The applicant now sought to have his name removed from the list of contributories, on the ground that the directors had no power, under the special Act of 1864, to issue the shares, one-third of each share not having been paid up. The Master of the Rolls, held that the word "issue" referred to the issue of certificates, and the word "vest" to the vesting of shares, so as to become the property of the holder for all purposes; but that the irregularity of issuing certificates before one-third was paid did not relieve the shareholder of his liability, and that his name must, therefore, remain upon the list of contributories.

Meetings of Scientific Societies.

GEOLOGICAL SOCIETY OF LONDON.

May 6: Prof. A. C. RAMSAY, LL.D., F.R.S. (Vice-President), in the chair.

The Rev. James Crombie, M.A., St. John's Wood-terrace; Charles Judd, A.K.C., F.R.A.S., Stoneleigh Villas, Tottenham; Duncan G. F. Macdonald, Spring Gardens; J. S. Phené, Carlton-terrace, Oakley-street, W.; and M. Thomson, College House, Southgate, were elected Fellows. The following communication was read:—

"On the Quaternary Gravels of England," by Alfred Tylor, F.L.S.

Mr. Tylor first compared, by means of sections and models, the gravels of the Aire Valley at Bingley, of the Taff Vale between Quaker's Yard Junction and Aberdeen Junction, and of the valley of the Rhonda near its junction with the Taff. He then described the cave-section of Bacon Hole, Gower, and the sections exposed at Crayford, Erith, and Salisbury, comparing the angles of deposition of gravel beds conceding the escarpment of the chalk in these last three localities with the same conditions at Brighton and Sangatte. By comparing the gravel beds at different levels, and upon strata of different age and configuration, he showed in what respect they differ from each other. The bulk and height of the Quaternary deposits had strengthened the conviction which he expressed in his previous paper (on the Amiens gravel) that there was a long period, reaching nearly to the historical epoch, in which the rain-fall was excessive, and which he termed the "Pluvial period."

These sections also led the author to the following conclusions:—1. That the debris was deposited by land floods, and that the mode of deposition was quite distinct from that of moraines produced by the melting of ice.—2. That the character of the deposits in the valleys of the Aire, Taff, and Rhonda proves that they were formed under similar conditions.—3. That these gravel beds point to a Pluvial period of great intensity and duration.—4. That the ice action of which there is evidence was subordinate to the aqueous action.—5. That the fossiliferous Quaternary deposits have been best preserved where they have been formed in cavities lying between the edge of the bank of a river, estuary, or sea, and an escarpment running parallel with it at no great distance.—6. That the immediate source of the gravels was the high land adjoining the rivers, whence they had been washed down by rain, with the assistance of lateral streams, into the lower ground, where they had come into contact with larger quantities of running water, had been mixed with rolled materials, and spread in thick beds over the bottoms and slopes of valleys or the sides of escarpments.—7. That the surface of such a deposit rarely slopes at more than 2° or 4°, while the slope of the beds lower in the series near the escarpment averages 12°. The escarpment is usually concealed under a coating of gravel or loess.

Mr. PRESTWICH dissented from the view of the author, that the valleys had been excavated to their present depth before the gravels were deposited; and, with reference to a former paper, explained that Mr. Tylor and himself had taken different points of observation near Montiers, and that his own views as to the separation which in some cases may be shown to exist between the high and low level gravels were correct.

Mr. EVANS also combated Mr. Tylor's views, and pointed out the difficulty of accounting for deposits of gravel such as are at present found in valleys already excavated to their present depth.

Mr. W. BOYD DAWKINS objected to call in hypothetical causes to account for effects when existing causes are sufficient, and cited the sudden melting of snow as a sufficient cause, as had already been suggested by Mr. Prestwich.

Sir CHARLES LYELL supported the same view, and mentioned a case which had occurred at Salisbury some few years ago as an instance of the effects of such floods. He also cited the existence of flint implements in the gravels on either side of Southampton Water as evidence of the existence of man during a long period of excavation of valleys. He also mentioned the discovery by Dr. Harris of flint gravel identical with that of the present valleys beneath the basalt of Miocene date in Antrim.

Mr. SEARLES V. WOOD, jun., insisted on the impossibility of even an enormously increased rain-fall filling the valleys, as suggested by Mr. Tylor, and pointed out the influence which such an accession of fresh water must have had on the animal life in the estuaries. He also mentioned tidal action as an excavating agent in valleys.

Prof. ANSTED showed, by calculation, that even a vast increase in the rain-fall would not suffice to fill the valleys so as to deposit the gravels as at present found.

Mr. WHITAKER quoted the existence of distinct terraces of gravel one above the other in the Thames valley as proving the gradual excavation of the valley.

Prof. MORRIS doubted as to the precise character and age of the deposits in the valleys in South Wales having been accurately ascertained.

Mr. TYLOR briefly replied.

Prof. RAMSAY made some concluding remarks, expressing his disagreement with the views of the author as to the enormous magnitude of the ancient rivers.

On Wednesday, the following papers will be read:—

1.—"On the Eruption of the Kaimeni of Santorin," by Dr. J. Schmidt: communicated by Sir R. I. Murchison, Bart., K.C.B., F.R.S., &c.

2.—"On the Structure of the Crag-beds of Norfolk and Suffolk, with some observations on their Organic remains: Part II. Red Crag," by J. Prestwich, F.R.S.

3.—"On some Carboniferous Corals," by James Thomson: communicated by Dr. P. Martin Duncan, Sec. Geological Society, &c.

INSTITUTION OF CIVIL ENGINEERS.

May 12: CHARLES HUTTON GREGORY (President) in the chair.

The paper read was on "The Durability of Materials," by Mr. Edwin Clark, M.Inst.C.E. The author expressed the opinion that a series of papers, devoted not so much to the special application of those philosophical principles which formed the basis of practice, as to the consideration of the principles themselves, would be of great interest; as numerous questions occurred which could be more effectually discussed in their abstract capacity than in connection with the practical applications out of which they arose. Well-established fundamental principles had been arrived at on many subjects which it was advisable should be definitely recorded. The list of materials used by the engineer was small. It included stone and timber among natural productions, and bricks and cement and the metals among artificial products. It was difficult to state, even approximately, the positive life of either of these articles. The durability of any material depended, not only on its own inherent properties, but principally on the agencies to which it was exposed; as, for instance, the effects due to climate.

On examining all the facts, and seeking some common characteristic, it was found that among all the causes of decay humidity held the first rank. The decaying influence of humidity was evidently dependent on other coincident circumstances. The mere pressure of water, or even of a saturated atmosphere, was not sufficient to induce rapid decay, which appeared to be caused by humidity only under peculiar conditions. One of these conditions was well known by the popular title of dampness. The decay caused by dampness, as in the case of dry-rot, was as effectually prevented by the presence of water as by a constant current of air, whether perfectly dry, or saturated to any degree of humidity. Damp, therefore, was not the mere presence of moisture in the ordinary form in which it was held in solution by the atmosphere. If an hygrometer were placed in a damp situation it would simply indicate perfect saturation; no evaporation took place, but the cotton covering of the wet bulb was speedily covered by a peculiar mould, well known by its fungus-like odour, and in a short time it was converted into an impalpable powder, or ash. Under similar circumstances timber, leather, paper, and all like materials underwent the same rapid decomposition; vegetable gums and oils, that were insoluble in water, and even dry hard paints and varnish, became soluble and liquid. Massive timbers were rapidly disintegrated to the core, entirely losing their weight, though still retaining their form; and they were often totally free from apparent moisture, although at times dotted externally by drops of brilliant water. Damp spots were, moreover, peculiarly hygrometric, indicating atmospheric changes with remarkable precision, and temporary desiccation in no way disturbed this process. The peculiar odour which always accompanied this condition was one of the best tests of its existence; and the expression that a room smelt damp was strictly correct. The effects were, within certain limits, intensified by increase of temperature and absence of light, and arrested by poisons destructive to vegetable life. If this phenomenon of decay were more closely examined the process would be found to resemble, in many respects, a slow combustion. The ultimate results of combustion and decay were strikingly similar; the union with oxygen was slowly effected, and the residue was more or less diluted with foreign substances; but whether bodies were burnt or decayed the remains in the ashes were substantially identical. Decay might thus, to a great extent, be looked upon as a decomposition, resulting from the slow chemical combination of oxygen with the matters decomposed. Now, if slow combustion were the cause of decay, and that particular state called dampness were so important an accessory, the enquiry naturally suggested itself, what connection existed between those agencies, or in what way could damp promote the absorption of oxygen? In the case of organic substances, the presence of vegetation in the form of fungus, or mould, was an invariable characteristic of decay, and the decomposing effect of all vegetable growth was beyond question. It might be said, that the vegetable growth alluded to was the effect rather than the cause of decay. Doubtless the spores of microscopic fungi followed the law of all other seeds in vegetating only under the peculiar conditions of soil, light, and moisture which were adapted to their growth; dampness and partial darkness, and absolute quietude, and even decay, might be essential to their existence; and, therefore, it was only under such conditions that they appeared at all. But, nevertheless, when they did appear, their presence rapidly accelerated the decay, and they furnished a vital medium, capable of accomplishing the observed effect—combustion, or slow union with oxygen, of the substances on which they throve. It was probably by some such chemical vital action the fact could be explained, that even the hardest rocks, were rapidly decomposed by the growth of lichens, or that decay should be arrested by poisons which could exert no other influence than the prevention of vegetation. It was equally remarkable that in the putrefaction, or rapid chemical decomposition, of animal and vegetable substances the same profusion of the lower forms of animal, as well as vegetable, organisms characterised the phenomenon.

Whatever might be the cause of decay, moisture was an indispensable element. Dry air was incapable of decomposition. Water was a carrier of oxygen in a potent form; and it was only from water, and more especially when in the form of vapour, that the oxygen necessary for decay could be obtained. The durability of tin and iron roofs in Geneva and St. Petersburg was due to the absence of moisture; and the importance of some shelter for timber, and of thorough ventilation, wherever it was employed in this moist climate, was a necessary corollary.

The durability of metals, like that of organised substances, depended mainly on the resistance they offered to combination with oxygen; and thus their decay might also be regarded as a slow combustion. But their durability further depended on the character of the oxides formed on their surface. Iron exposed to moisture was soon coated with rust, in the form of hydrated peroxides; and as these oxides did not adhere to the surface, additional flakes constantly formed and fell away, until the whole mass was destroyed. Wrought-iron in a pure dry atmosphere suffered, practically speaking, no deterioration in any lapse of time. It was extremely durable in distilled water free from air; but it was slowly oxydised in a moist atmosphere, and with fatal rapidity in air or water containing free acids or other corrosive agents. It was, however, efficiently protected from such agents by paint, which adhered to clean iron with great tenacity. It was also a fact, not hitherto satisfactorily accounted for, that oxidation was to a great extent arrested by vibration. The painting of wrought-iron girders and roofs, more especially in the neighbourhood of smoky towns, was a precaution of the utmost importance. Every care should be taken to expose the iron as freely as possible to the air, to leave no hollows where water could collect, to avoid the contact of damp earth, and especially of vegetation, and to throw the material into the form of heavy bars rather than thin plates. Painting was more economically performed, and was more effectual, when constantly attended to, than under the vicious practice of laying on three or four coats, and then leaving the work for years, till the paint all peeled off, with a layer of rust attached to it. The Britannia Bridge furnished a striking illustration of the value of this system. The maintenance had been effected by two or three men, constantly on the work, who attended to the slightest symptom of local discolouration. As a consequence, the author did not hesitate to express his firm belief, that the total loss from rust of the 10,540 tons of which the tubes consisted, did not in 20 years amount to a single pound weight.

Cast-iron when exposed to the action of sea water slowly decomposed, the iron being dissolved, leaving behind a graphite or plumbago. The action was, however, superficial, and very slow. It could be preserved by painting, where accessible for that purpose, or by any protection which prevented continual renewal of the surrounding medium, as when inclosed by brickwork or masonry. In fresh water it suffered no such deterioration, and under ordinary circumstances its durability in a pure atmosphere appeared unlimited.

In the case of zinc, although the bright metal oxydised even more rapidly than iron, yet the oxide adhered with such tenacity to the metal that it afforded an efficient protection against the continuation of the process. To this property the metal owed its great durability, more especially as its oxide was insoluble in water. In the presence of any solvent of the oxide, this metal was so speedily destroyed as to be practically useless, unless protected by paint. The destruction of zinc in smoky districts was, however, principally due to galvanic action. A similar action produced the rusting away at the base of iron railings, when fixed in stone-work, as was usually the case, by being run in with lead. The contact of copper with the iron plates of a vessel was also a source of great danger; and there were numberless other instances in which the contact of metals of different conducting powers was equally destructive. In all such cases the use of paint furnished, at any rate, a temporary remedy.

It was difficult to over-estimate the value of the introduction of the process of coating iron plates with zinc, by simply cleaning and immersing them in the molten metal. All that had been said on the subject of zinc applied equally to galvanised iron, as it was called. In a clear atmosphere its great durability, its stiffness, its freedom from expansion, and its economy, were all qualities of the highest value; while, on the other hand, without constant painting, it was wholly unfitted for the atmosphere of smoky towns, or manufactories, or even stations where it was exposed to the fumes from locomotives. Both the corrosive and the galvanic actions, which in such cases were so destructive, did not cease with the destruction of the zinc, which was soon effected, but continued also to act, with fatal effect, upon the iron itself, as might be seen in many railway stations and sheds near manufacturing towns. The corrosive tendency in zinc and iron obliged the use of less oxydisable metals, copper and lead. Lead slowly absorbed oxygen and carbonic acid in moist air. It was acted upon by certain waters, and was occasionally riddled with holes by the larva of an insect; and its expansion and contraction required to be carefully allowed for in its use. Its ductility rendered it a valuable material. Copper might, however, in many instances, be used with great advantage in its stead.

The action of sea water on copper was so important that it was particularly alluded to. The object in covering a vessel with copper was solely to prevent the adhesion of barnacles and other molluscs. This property was not due to the poisonous quality of its salts, as was sometimes asserted, nor was copper used on account of its durable qualities; on the contrary, its value depended on its slow destruction. The chloride of copper formed beneath the attachment of the barnacle being a soluble salt, the creature no sooner effected a lodgment than it was at once set free by the solution of the salt; while the salts which formed on zinc or iron being insoluble, the plate was rather protected than otherwise by the tenacious parasite. Hence the difficulty of devising an efficient paint for iron ships; for while, on the one hand, it must be slowly soluable in water to prevent this adhesion, it must, on the other hand, be sufficiently insoluble to be durable. Ordinary oil paint was the most efficient material for protecting either metals or wood from the effects of moisture and air; but all oils, resins, and gums exposed to air, and especially to the light of the sun, oxydised and burnt away with more or less rapidity, leaving a powdery residue behind. As a preservative of paint against the heat of the sun and light, attention was directed to the virtue of a coating of silicious sand, dredged on the paint while wet.

The durability of matter was a subject of the highest philosophical interest. The universal law on this planet appeared to be that no form should be permanent. Never-ceasing destruction and reconstruction were characteristic, within the range of the atmosphere, of everything that existed, whether as regarded organic life or inorganic matter; and it was probable that even the atmosphere itself was subject to the same decree.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON BROTHERS return their most sincere thanks for the great patronage bestowed and confidence reposed in their firm for 25 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mine or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

SATURDAY, MAY 9.—Market more active, with a demand for Prince of Wales, at 51s. to 53s.; West Chiverton, 64 to 65; East Caradon, 4⅜ to 4⅞; Herodsfoot, 39 to 41; Marke Valley, 6⅜ to 6⅞; Emily Henrietta, 35 to 40; Great Wheal Vor receded to 15, sellers; Wheal Grenville, 35s. to 37s.; Great Laxey, 16½ to 17½; Chiverton Moor, 6⅛ to 6⅜.

MONDAY.—Market very dull. East Grenville, Grenville, West Caradon, Prince of Wales, and North Crofty receded. Chontales, East Caradon, and Marke Valley firm at quotations. East Grenville, 31s. to 33s.; Grenville, 33s. to 35s.; West Caradon, 4 to 4½; Prince of Wales, 50s. to 52s.; North Crofty, 2⅛ to 2⅜; Chontales, 2⅜ to 2⅞; East Caradon, 4⅜ to 4⅞; Marke Valley, 6⅜ to 6⅞.

TUESDAY.—The market is very quiet to-day. Chontales, Prince of Wales, and Clifford Amalgamated flat. Great Wheal Vor firmer, at 15½ to 16½; Chontales, 2¼ to 2⅜; Clifford Amalgamated, 5 to 5½; Prince of Wales, 49s. to 51s.; West Chiverton, 64 to 65; Emily Henrietta, 38 to 40; East Caradon, 4⅜ to 4⅞; North Crofty, 2½ to 2⅝; East Grenville, 32s. to 34s.

WEDNESDAY.—Market quiet. Chontales receded to 2⅜, sellers. Chontales, 2⅛ to 2⅜; Prince of Wales, 50s. to 51s.; Chiverton Moor, 6¼ to 6½; Emily Henrietta, 38 to 40; East Caradon, 4⅝ to 4⅞; West Chiverton, 64 to 65.

THURSDAY.—This is settling day, and not much business doing. Prices about the same as yesterday. Chiverton Moor, 6¼ to 6½; Prince of Wales, 50s. to 52s.; Wheal Grenville, 33s. to 35s.; Wheal Mary Ann, 21½ to 22½; Marke Valley, 6⅜ to 6⅞; Great Wheal Vor, 15½ to 16; Chontales, 2¼ to 2⅜; East Caradon, 4¼ to 4¾.

FRIDAY.—There is a fair demand to-day for East Grenville, Great Retallack, and Chiverton Moor. Chontales and Prince of Wales flatter. Chiverton Moor, 6¼ to 6½; Chontales, 2⅛ to 2⅜; Prince of Wales, 49s. to 51s.; East Grenville, 34s. to 36s.; Great Retallack, 2 to 2¼; West Chiverton, 64 to 65.

Mining Correspondence.

BRITISH MINES.

ABRAHAM CONSOLS.—John Vivian, May 14: There is very little alteration to report since my last. The lode in sinking No. 2 shaft is much the same as reported last week, disordered by cross-courses, but we have had a floor of decomposed granite passing through the shaft this week, which was thickly impregnated with tin; this I consider a good indication.

BEDFORD UNITED.—J. Phillips, May 13: There is no change this week.

BEDOL-AUR.—H. R. Harvey, May 13: The winze sinking in the bottom of the 100 yard level is progressing favourably. We are getting some stones of ore in the clay. After we have sunk a little deeper I expect to get something good, as we are only a few yards from where the Mfiwr lode takes the swallow. The ground in the rise in back of the 100 has much improved since last report; it is easier for progress, and more kindly for ore. I think we are near the junction of the Mfiwr and Bell-Gwyn lodes. The stope in the 77 is rather poor, but in congenial ground for ore. Leigh's pitch is looking promising for ore.

BRYNPOSTIG.—John Kitto, May 14: The sinking of the engine-shaft below the 12 is being continued in a lode worth about 1½ ton of lead ore per fathom, and the general character of the lode is everything that can be desired. The sump sinking below the 12 fathom level, east of engine-shaft, started at the extreme east end of this run of ore ground, is now getting into a productive lode, and will continue to improve; whilst the sump sinking west of shaft, below the same level, is worth 1 ton of ore per fm. The tribute pitches in roof of the 12 are still looking well, and are being worked at tributes varying from 55s. to 4l. per ton, and the men doing well. There is no change in the end driving east in the 12 since my last. We had a little ore at the new shaft, sinking on the cross sett, to the east of Brynpostig, and on the same lode a day or two since, and the prospects are very encouraging indeed.

BWADRAIN CONSOLS.—R. Northey, May 11: There is no particular change in the drivages since last reported. The lode in the 45 is 4 ft. wide, and worth 1 ton per fathom, and of an improving character. The rise in the back of the 10 is holed to the surface, and has greatly improved the ventilation. The stopes throughout the mine are without any change to report. We are still busy about the new line of rods. The water is very scarce for crushing.

CAPE CORNWALL.—R. Pryor, F. Hosking, May 14: The tutwork bargains continue just the same as when last reported on. We hope shortly to be able to drain the water from the 90 winze, after which we shall at once commence to put out the cross-cut north in the 100 to intersect the north lodes; this important point will be carried out as soon as the winze is holed for ventilation.

CARADON CONSOLS.—S. Bennetts, May 12: There is not much change worthy of notice in either the 78 cross-cut north or the west end. In the 68 west both the ground and lode seem to be changing for the better; I think this end is getting near the small cross-course seen in the level over, as the ore in the lode has become coated grey. No alteration in the winze below this level.

CARNARVONSHIRE CONSOLS.—R. Roberts, May 13: Coed Mawr Pool Mine. West Driving: No change since I wrote last week. The lode in the end driving east has improved; we found some ore in it this morning; I hope for more lead in this level shortly. There is no change in the south driving, on new lode. The parallel lode west continues to produce ore.—Pencraig: To the west the lode is very large, but not producing so much ore. No change in the east end since last week. The adit level is going on just the same. We have about 7 tons of ore dressed clean ready for the market.

CARN CAMBORNE.—J. Truscott, May 9: In sinking the engine-shaft below the 70 the ground is granite, and very favourable for sinking. In the 70 west the lode is 4 ft. wide, composed chiefly of capel and peach, intermixed with mundic and copper ore. In the 60 west the lode is worth 10l. per fathom. In the 80, west of western shaft, the lode is 3 ft. wide, worth 8l. per fathom. The stopes continue without alteration. All other operations continue much the same as for some time past.

CENTRAL SNAILBEACH.—J. Kitto, May 84: There is no particular change to notice in any part of the mine since my last report, except that in the sump sinking below the 164 yard level the ore is forming itself more into a solid leader, and is now in the eastern end of the said sump from 3 to 4 in. wide; there is also ore scattered throughout the lode, which together is from 6 to 7 ft. wide. The sinking of the engine-shaft, as well as the driving of the 164 yard level west, steadily progress, the former being now down about 18 yards below the 164.

CHANTICLEER.—Wm. Wasley, May 14: We continue to make good progress in driving the 110 yard level west of shaft. The lode in the end is now about 2½ ft. wide, composed of clay, spar, &c., and producing some fine lumps of ore occasionally; it has a very kindly appearance.

COLQUITE AND CALLINGTON.—Thomas Doidge, May 12: The 20 end is much improved. The lode is more of the character seen at Colquite. The shaftmen brought up some splendid stones of lead to-day from the end.

CRELAKE.—William Skewis, Wm. Hooper, May 14: The winze sinking below the 62 is set to three men, at 6l. per fathom; lode 3 ft. wide, composed of mundic, capel, and copper ore, worth 6l. per fathom. The 62 west is set to drive by two men, at 2l. 10s. per fathom; ground getting more settled, mixed with spar and mundic, and letting out more water. The lode in No. 1 stope, in back of this level, is 2 ft. wide, worth 5l. per fathom; and in No. 2 stope the lode is 2½ ft. wide, worth 7l. per fathom. The 50 west is set to drive by two men, at 2l. 15s. per fathom; lode 2 ft. wide, composed of mundic, spar, and copper ore, but not to value. No. 3 stope, in back of this level, is set to six men, at 1l. 12s. per fm.; lode 2½ ft. wide, worth 10l. per fathom. The 40 west is set to drive by four men, at 5l. 10s. per fathom; lode 3½ ft. wide, composed of strong mundic, capel, and copper ore, worth 5l. per fathom, with good prospects of further improvement. A new rise in back of this level, which is required for ventilation, is set to two men, at 3l. per fathom; lode 1½ ft. wide, yielding saving work for copper and mundic ores. The lode in No. 3 stope, in back of this level, is 2 ft. wide, worth 11l. per fathom. The 28 west is set to drive by two men, at 3l. per fathom; this end has been disordered by a slide, but the lode is again resuming its former size and appearance, yielding saving work. The lode in No. 2 stope, in back of this level, is 2 ft. wide, worth 8l. per fathom; and in No. 3 the lode is 2½ ft. wide, worth 11l. per fathom. The tribute pitches throughout the mine are without any change to notice.

CUDDRA.—F. Puckey, May 13: To-day we have communicated the winze sinking below the 130, west of Walker's shaft, with the rise from the back of the 142, which has well ventilated that level. We shall begin at once a new stope from the winze to take away the tin ground from the 130 to the 142, and thereby hope to increase our returns of tin. The lode in the western stope in the back of the 100 is looking exceedingly promising, and improving in value, now worth 12l. per fathom for tin. All the other parts of the mine are without alteration.

DEEP LEVEL.—May 8: The lode in the 204 yard level is not looking quite so well as when last reported; there is more spar mixed up with the rib of ore. The 174 yard level is all clear from Eyton's shaft to the junction of the deep level vein (70 yards). We are preparing to put down launders in the bottom of this level, to take up all the water a little to the west of Eyton's shaft, and to carry it to the junction of the deep level vein. We want to keep this piece of ground as dry as we can, so that as little water as possible may find its way to the 204 yard level, until we can find a place for it to escape to the deep level. In the 174 yard level, west of Pant-y-Go shaft, on Pant-y-Go vein, we have about 3 feet in height of whole ground in the bottom of the level at present, where the lode is 3 feet wide, composed of stiff clay, but unproductive. There is no change in any other of the bargains since last reported.

DEVON AND CORNWALL UNITED.—T. Neill, May 12: We have no change since the last report. In the 34 west we are driving by the side of the lode, which will be taken down in time for next week's report.

EAST CARADON.—J. Truscott, May 13: Caunter Lode; The 115 east by the side of the lode. The 100 east produces stones of ore. The 100 west is poor. The 90 east is worth 12l. per fathom.—South Lode: The 70 west is worth 5l. per fathom.—Childs' Lode: The 80 east is producing saving work. The 80 west is worth 8l. per fathom. The 70 east is worth 12l. per fathom. The 70 west is worth 5l. per fathom.

EAST CARN BREA.—I. Richards, May 11: Thomas's engine-shaft has reached the depth for a 90 fm. level, and a drivage westward has been commenced; the lode at this point is 1½ ft. wide, composed of quartz, capel, mundic, and a little copper ore.—Thomas's engine-shaft: No. 3 Lode: The lode in the 80 east is 1½ ft. wide, consisting of capel, quartz, fluor, mundic, and saving work for copper ore. The 80 west is suspended to admit of a rise being put up in the back thereof, the lode in which is 2½ ft. wide, consisting of capel, quartz, mundic, fluor, and copper ore, worth 2 tons per fm. The lode in the 60 west is 1 ft. wide, composed of capel, quartz, and stones of copper ore. The lode in the 50 west is 1½ ft. wide, composed of quartz, capel, fluor, and very fine stones of copper ore. Williams's rise, in back of the 50 west, is suspended, in consequence of the ventilation being rather imperfect. The lode in the 40 west is 1 ft. wide, consisting of capel, mundic, quartz, and a little copper ore.—Buckley's Shaft: No. 6 Lode: The lode in the 50 east is 1 in. wide, composed of capel, fluor, mundic, and a little copper ore. The lode in the 50 west is 1 ft. wide, composed of capel, quartz, and a little copper ore. The lode in the 40 west is 1 ft. wide, producing some saving work for copper ore.

EAST GUNNISLAKE AND SOUTH BEDFORD CONSOLS.—J. Bray, May 14: The lode in the shallow adit is 6 feet wide, and composed of spar and mundic, with good stones stones of ore. No change in the 36 fm. level cross-cut south.

EAST POOL.—Wm. S. Garby (Manager), J. Maynard, A. James, May 11: Great Lode: The 170 is driven east of the cross-cut 25 fms., and is worth for tin and copper 20l. per fathom. The 170 is driven west of the cross-cut 29 fms., and is worth 30l. per fathom. A stope in the back of this level, east of the cross-cut, is worth for copper 30l. per fathom. The winze in the bottom of the 160, on the cross-course, is worth for tin 10l. per fathom. The 160, west of the cross-course 30 fms., is worth for tin and copper 20l. per fathom. Two stopes in the back of this level east of the cross-cut, and two stopes west of the cross-cut, are worth 25 per fathom each stope. The 150, east of the cross-cut, is worth for tin 12l. per fathom.—Engine Lode: The 170 west, on the north part, is poor. Two stopes in the back of this level are worth 20l. per fathom each. The 150, west of the cross-cut, is worth 10l. per fathom. The cross-cut south at the 150, on the cross-course, is driven 22 fms., and has intersected the engine lode. It is worth 20l. per fathom for tin, and the south part not yet seen. The engine-shaft is sunk below the 170 fm. level 10 fms., and we hope to drive next month at the 180 fm. level.—South Lode: The 130, east of the cross cut 16 fms., is worth for tin 20l. per fathom. A rise in the back of the 130, on the cross-course, is up 11 fms., and is worth for tin and copper 11l. per fathom. Two stopes in the bottom, west of the cross-course, are worth 30l. per fathom each stope. The 90 west, on the north branch, is producing low-quality tinstuff.

EAST ROSEWARNE.—C. Glasson, May 14: In King's shaft, sinking below the 105, the lode is 12 in. wide, worth 7l. per fathom. In the 105, west of shaft, there is no lode taken down since my last report; we shall do so by the end of this week. In the 105, east of shaft, the lode is 10 in. wide, worth 4l. per fathom. In the rise in the back of the 95, west of shaft, the lode is 15 in. wide, worth 8l. per fathom. In the 95, east of shaft, the lode is 12 in. wide, worth 3l. per fathom. In the 85, west of shaft, the lode is 10 in. wide, worth 6l. per fathom, and letting out more water than usual.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, May 13: We have this morning taken down the lode in the engine-shaft sinking below the 110 fm. level, which is from 20 in. to 2 ft. wide, and worth 4 tons of good copper ore to the fathom, which is looking better for a continuance than the lode did on the last taking down; we would also remark that in the eastern end of the shaft there is a good lode for copper ore standing 8 ft. high. The lode in the 110 east is in two parts, and producing a little tin. The lode in the 110 west is 2½ feet wide, worth 1 ton of copper ore and tin, or 5l. per fathom, together worth 10l. per fathom. On the north side of this lode we have discovered a vugh, which is letting out a quantity of water; and we, therefore, believe that this will lead to a bunch of copper ore. The stope above this level is worth for ore and tin 8l. per fathom. There is no change in the caunter at the 95 east. The lode in the rise above the 95 east is worth 10l. per fathom. We are busy dressing, and we hope to sell a good parcel of tin next week.

EAST WHEAL RUSSELL.—W. Richards, May 14: The men are going on tolerably well in clearing up the adit shaft on the north boundary lode. The north lode in the stope in back of the 77 is yielding 3l. worth of ore per fathom. The north lode in the 88, east and west of the cross-cut, is 20 inches wide, containing a little mundic and copper ore, but not enough to value. The north lode in the 100, west of the cross-cut, is 2 feet wide, and yields 1 ton of ore per fathom. The north lode in the 100, east of the cross-cut, is 3 feet wide, containing quartz, mundic, and 1 ton of ore per fathom. The south lode in the 130 east is 2½ feet wide, containing some rich ore occasionally; this is a kindly point, and I expect a good improvement in the eastern side of the slide. The clearing through the run in the 130 east has been a troublesome job, but there are now strong indications of our being nearly through it. I am anxious to be able to resume the 130, east of the slide, on the course of the north lode. The indications there for a good discovery are very strong.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., May 9: The new engine-shaft is in regular course of sinking below the 70 fm. level by six men, and the ground moderately easy for progress. The lode in the 70 west is still influenced by the small cross-course recently intersected, which appears to have heaved the main part of the lode south. The lode in the 70 east is yielding 1 ton of ore per fm. The lode in the 60 east is worth 3 tons of ore per fathom. The lode in the winze sinking below the 60 is worth 5 tons of ore per fathom. The lode in the 50 east is hard and slow of progress, producing good stones of ore. The tribute department is without change.

GONAMENA.—R. Pascoe, May 12: The lode in the 138 west, on Venning's, is about 2 ft. wide, and consists of mundic, quartz, and good stones of copper ore; it has a very promising appearance, and likely to improve. The lode in the winze sinking below the 114, on this lode, is large, and worth fully 25l. per fm. The lode in the winze sinking below the 114, on Gilpin's, is worth 1 ton of ore per fathom. The lode in this level east is 1½ ft. wide, and contains black and yellow copper ore, but not sufficient to value.

GREAT NORTH DOWNS.—William Rich, Cornelius Bawden, May 13: We have resumed the sinking of King's shaft below the 84; the lode is worth 15l. per fathom for the length of the shaft (9 feet). The 84, west of King's, is worth 10l. per fathom, and the ground moderately easy for driving. We are forcing on the sinking of Sleggan's engine-shaft, and hope to commence cutting through the lode, and open out east and west in about a month from this time. The 74 west is in a hard bar of ground, consequently the lode is unproductive. Butler's shaft yields good stones of ore. The lode is cut through in the 64, west of Butler's, where it is 12 feet wide; we shall now urge on the level west on the north part of the lode. There is nothing new in the 64 fathom level cross-cut south; set to drive at 3l. 10s. per fathom. We have good stones of ore from the south part of the lode, at Vivian's engine-shaft.

GREAT RETALLACK.—G. R. Odgers, May 14: The masons are getting on very well with the house; they are above the centre of the first floor, and we have only some 8 ft. more to the top of the bob-end, and I, therefore, do not think we shall be behind the time calculated upon.

GREAT SOUTH CHIVERTON.—J. Nancarrow, J. George, May 8: Fair progress is being made in the 50 cross-cut north. The 50 east looks very promising. The 40 west has improved, and is getting into lead: this lead was seen first in branches dropping into the lode from the south, and is now in the lode itself. This is most important, as the end is not yet driven so far west as where we had lead in the 80, and the general appearance of the lode was never so good as now. In the 30 west we have a large flookan coming in from the south, which looks like the south lode, and which is likely to make lead at its junction with the north lode in driving a little further. The 20 east presents the same encouraging appearance as last week. The new shaft is down 3 fathoms. The prospects throughout the mine are improving.

GREAT SOUTH TOLGUS.—John Daw, May 13: Friday last was setting-day. In Noel's shaft, sinking below the 150, the lode is 1 foot wide, producing 1½ ton of ore per fathom; set to six men, at 14l. per fathom. In the 150, west of Noel's shaft, the lode is producing 1 ton of ore per fathom; set to four men, at 3l. 10s. per fathom. In the rise in the back of the 150, east of Noel's shaft, the lode is 1½ foot wide, producing 2 tons of ore per fathom; set to six men, at 3l. 10s. per fathom. In the 150, east of new shaft, the lode is 1 foot wide—unproductive; set to four men, at 5l. per fathom. In the 140, east of Noel's shaft, the lode is 1½ foot wide, producing 1 ton of ore per fathom; set to six men, at 4l. 4s. per fathom. In the 128, east of Noel's shaft, the lode is 2 feet wide, producing 1 ton of ore per fathom; set to four men, at 3l. 10s. per fathom.

GREAT WHEAL BADDERN.—R. Pryor, H. Tregoning, May 9: The ground in the 75 fm. level cross-cut, south of Hill Brothers engine-shaft, has been very spare and troublesome for driving during the past week, in consequence of so much water forcing through the several branches crossing the end, indicating that we are very near the tin lode, and we believe these branches to be coming therefrom. The ground in the 75, west from the cross-cut, on the lead lode, is just the same as when last reported; the lode retains its former size, letting out a considerably increase of water the last day or two, which is a strong indication that we are reaching on towards the cross-course.

GREAT WHEAL FORTUNE.—T. George, May 14: The 150 fm. level is driven east of Hosken's shaft 2 fms., and the shaftmen are now employed cutting plat, and making the necessary preparations for again commencing to sink the shaft. The lode in the 140 fm. level, driving east of shaft, is 4 ft. wide, producing a little tin, but not sufficient to value. In the same level west of shaft, close to the present end, we have within the last few days cross-cut the north part of the lode, which is worth from 20l. to 30l. per fm.; this part of the lode appears to be standing for some distance behind the end, and is now being taken down, and as far as seen is looking exceedingly well; the lode going west is also looking well for further improvement. This discovery is immediately under where the lode made rich in the 114, and is evidently a continuation of the same run of tin, which is of the highest importance to the mine, showing the shoot of tin to be holding down. The stopes in the back of the 126 fm. level are now being worked on tribute.

HARWOOD.—J. Race, May 8: There is no alteration to note in the end of the level east in the old vein at Scar Head since my last report. The end and stopes in North String east are also about the same as last reported, and worth from 8 to 10 cwts. of ore per fathom. We are now up with the low level at Trough into the midst of that series of veins worked formerly by a top level, and very rich in the Little Limestone. We are working No. 1 or Trough vein of this series at present; one stope yielding 1 ton of ore per fathom, and I expect the stope above to be better, worth 1½ ton of ore per fathom. We shall get the wagon-way completed to this in a few days, and then we shall begin to drive to cut No. 2 or Richardson's vein, which is but a short distance from the present end of the level, and is said to have been the best of these veins when worked in the top sills. We have two more veins lying to the north at no great distance, whole in both Scar and Little Limestone, and they have been worked about a quarter of a mile west of this, rich in the Scar Limestone. We have about 10 tons of ore on the floors and broken in the mine at present.

GWYDYR PARK.—W. Smyth, May 12: In Gwydyr driving west the lode is about 18 in. wide, composed of spar, mundic, blende, and good stones of lead ore, also a little better than it has been—a very kindly end. At Gwyn Llifion the men are engaged squaring and securing the end of the shaft, clearing stuff, &c. The water is down to the back of the 8 fm. level, and the engine works well.

HINGSTON DOWN CONSOLS.—T. Richards, May 13: Bailey's engine-shaft, below the 140, is without change. The 140 east is worth 22l. per fathom. The stopes in the back of this level are worth on an average 20l. per fathom. The stopes in the back of the 130 east are worth 22l. per fathom. The stope in the bottom of the 130 west is worth 18l. per fathom. The stope in the bottom of the 120 east is worth 20l. per fathom.

IMPERIAL.—E. Pearse, May 13: There is nothing new to report since last week. The engine is at work again, pumping and crushing, and to-day we are making the necessary preparations for removing the 6-inch lift from the 10 to the 20 fm. level; we shall then drop the 8-inch lift from the adit to the 10 fm. level. After this is done we shall be able to keep the water out of the mine without any trouble. The new bob-pit is cut, and the bob will be put into its place as soon as possible.

LOVELL CONSOLS.—Wm. Chappell, May 14: There is no change to notice since my last report. We have about 6 ft. more to sink, when we shall cross-cut the lode east and west of shaft; and, from working on the course of the lode in bottom of the adit, I have strong reasons to believe that we shall soon discover a good lode for tin, and at a small outlay.

MAES-Y-SAFN.—May 8: The lode in the 330, east of Grosvenor's, is improving, now worth 2 tons per fathom. The lode in the 310, west of Grosvenor's, is also improving, and worth 1 ton of lead ore per fathom, and looking very kindly. It looks cheering to see these levels improve after so long a period of unproductiveness. We are pushing on the mine at all points with a full complement of men, and have no doubt after a short time we shall be able to write more cheering reports. We have worked hard to keep up the samplings in the absence of the two great bunches of ore that we expected to have met with before now, and hope before long they will increase. Everything in the mine is going on well. Grosvenor's engine keeps the water in the eastern part very well, by working about six strokes per minute.

MAUDLIN.—John Tregay, March 9: In the deep adit level east the lode produces good stones of grey copper ore, and is promising for improvement. No other change to report.

MINERA UNION.—W. F. Harris, May 7: The following is a brief report of the progress made in this mine since the last annual general meeting, with the prospects up to the present time:—Douglas's Shaft: The 60 yard level has been extended north 18 yards, the lode consisting of chert and shale—at present suspended; this level being in unexplored ground, of which there are upwards of 200 yards to the boundary, may be looked upon as a very interesting point, and should not be lost sight of.—Brabner's Shaft: Several trials have been made about this shaft, both in the 60 and 80 yard levels, which have resulted in returning many tons of lead. The pitch in the back of the 80 yard level south being the principal, at present the lode is worth 15 cwts. per fathom. There is one very important trial I would here bring before you—the cross-cut to the Red vein; this cross-cut has been driven east 75 yards at a great expense, and there remain about 20 yards to be driven, at a cost of 150l., to complete the distance, and determine whether or not the lode traverses this portion of the property. If discovered, a rich deposit of lead may be the result.—Boundary Shaft: Various trials have also been made about this shaft, chiefly on tribute, and a good quantity of lead returned. At present there are four pitches at work, raising lead at 7l. 15s. per ton. I would here recommend the driving of the bottom, or 60 yard level north, on the Grych lode, this would unwater the mine to a great depth, and open up a very productive piece of ground in that direction.—Low's Shaft: This shaft is being sunk on the Grych lode, directly over the boundary between this and the adjoining mine, and on which that company are now raising good lead. At present the shaft is 49 yards deep. The lode is 3 feet wide, composed of carbonate of lime and occasional stones of lead; it is a strong and promising lode, and will, in my opinion, become very productive in depth. At the 4 yards a level is being driven, and up to the present time has been extended 12 yards; the lode is 2 feet wide, composed of carbonate of lime, slightly mixed with lead and blende. This lode bears in the direction of the big cross-cut, which is within about 20 yards in advance of the present end, and I would, therefore, recommend the driving of that cross-cut, at a cost of 150l., to intersect the lode, which, I have no doubt, will be found productive.—Williams's Shaft: The 40 yard level, on the caunter lode, has been driven north 12 yards, which yielded several tons of lead, it then became unproductive, and the end being within a short distance of the boundary, was suspended; a winze was then sunk 12 yards, which yielded stones of lead, but had to be stopped in consequence of water. At a distance of about 60 yards south from the forebreast a cross-cut has been driven west 3 yards, and intersected the Cae Pant lode, on which 40 yards have been driven north, and a good quantity of lead raised therefrom. The present end is worth 5 cwts. per fathom, with a very encouraging prospect. The lode in the back of this level is worth 12 cwts. of lead per fathom. Other trials have been made, but nothing material discovered. The machinery and plant are in good order, and quite sufficient for present purposes. In conclusion, I beg to say that I still entertain a high opinion of this property, and by carrying out what has been recommended, I have no doubt of this mine becoming profitable.

— W. F. Harris, May 14: Low's shaft is just 12 yards below the 40; the lode is 3½ feet wide, composed of carbonate of lime, which contains occasional stones of lead; the ground is everything desired, and it is a mystery we have not more lead. I do expect an early improvement. The lode in the 40 is 2 feet wide, poor for lead, but very likely for producing lead.—Williams's Shaft: The lode in the 40 north is rather more settled, and now worth 5 cwts. of lead per fathom, with a good prospect. The lode in the back is worth 10 cwts. per fathom. The pitches throughout the mine yield a fair quantity of lead, according to the prices set, at from 6l. to 8l. per fathom.

MINERA UNION.—W. T. Harris, May 14: Low's shaft is just 12 yards below the 40 yard level; the lode is 3½ ft. wide, of carbonate of lime, containing occasional stones of lead, and ground favourable for progress. The lode in the 40 yard level north is 2 ft. wide, poor for lead, but good indications. The pitch in back of the 60, at Brabner's shaft, is worth 5 cwts. of lead per fathom. The pitch in back of the 80 south is worth 10 cwts. of lead per fathom.—Boundary Shaft: The lode in the bottom of the 60 south is worth 8 cwts. of lead per fm. The pitch in back of the 50 yard level is worth 5 cwts. per fathom.—William's Shaft: The lode in the 40 yard level north is worth 5 cwts. lead per fathom, and very promising; the lode in the back of this level is worth 10 cwts. lead per fm.

NEW CLIFFORD.—Jos. Michell, May 14: Since my last report of the mine everything has been pushed with vigour, and carried on in a very satisfactory manner, the only change that has taken place worth noticing is in the south cross-cut, where we have an increase of water, at least 60 gallons per minute, which I look upon to be very important, not only as a token we are very near the Penstruthal lode, but that when intersected we may reasonably calculate to find it rich for copper ore, as in this district such indication—water—is looked upon by practical miners as one of the very best symptoms for an abundance of mineral, and without a shadow of a doubt on my mind we shall very soon get it here. The north cross-cut still driving in a beautiful light mineralised killas, where lodes cannot possibly fail to be productive; here we have 7 or 8 fathoms more to drive to cut No. 3 lode.

NEW GREAT CONSOLS.—Richard Pryor, R. Trathen, May 13: During the past week we have not made any progress in the forking of the mine, in consequence of the breaking of the capstan rope, which to all appearance was thought equal to new. The tributers continue to break good pies of copper ore, which will be got about as soon as possible for market. The engine continues to work very well.

NEW PEMBROKE.—F. Puckey, J. Puckey, May 11: In the 75 fm. level, driving east of the engine-shaft, the lode is 1½ ft. wide, producing some good work for tin, and looking very promising for an early improvement. In the same level, west of the cross-cut, the lode in the end is 2½ ft. wide, a very promising lode, composed of quartz, peach, white iron, and tin, and worth 18l. per fathom. The winze sinking below the 60, east of the cross-cut, is communicated with the 75, which has well ventilated that level. We have commenced stoping the lode in the back of the 75, both east and west of the cross-cut. The lode in the stopes will average 3½ ft. wide, and is worth 16l. per fathom. We have resumed the sinking of the winze below the 60, west of the cross-cut, which is now down nearly 10 fathoms. The lode in this winze is 3 ft. wide, and worth 12l. per fm. The north lode in the 60 west, east of the shaft, is at present small and unproductive. In the 45, west of the great cross-course, we have intersected a very promising lode, nearly 4 ft. wide, composed of quartz and prian, containing spots of strong yellow copper ore and a little tin; this lode will, no doubt, prove productive for mineral after passing from the influence of the cross-course.

NEW TRELEIGH.—S. Michell, May 14: I do not see much change in the lode in the bottom of the new shaft for the past week; it is fully as large, with stones of ore. The rise in the back of the 70 is up nearly 7 fms.; the lode is letting out a large quantity of water from the west, which gives us an idea that it is proceeding from the ore gone down in the 60 fm. level, 2 or 3 fms. west of this point. The lode in the 60 fm. level, on the south part, is looking more kindly for ore than it has been; the lode is opening and discharging more water, which is a good sign; this apparently is draining the 40 fm. level; if such should be the case, it must certainly be a good feature, as the indications are most favourable in the bottom of the level. I may remark that the last 50 fms. driven is west, and under the slides mentioned in our former report.

NEW WHEAL TOWAN.—R. Pryor, May 13: We set the adit level on Friday last to drive north by four men, at 7l. per fathom, and hope to reach the lode at this point west of the cross-course in a few days.

NORTH DOWNS.—F. Pryor, J. Grenfell, May 12: The 60 west is presenting a better appearance than it did when last reported on, but the present value is about the same—5l. per fathom. A rise in the back of this level to communicate with the winze sinking below the 50 is worth 16l. per fathom. A stope in the back of this level is worth 15l. per fathom. The winze sinking below the 50 has further improved, now worth 10l. per fathom. A stope in the back of this level is worth 12l. per fathom. The 50 west, from point of horse, is worth 9l. per fathom. We have communicated the rise in the back of the 50 with the 40 fm. level, and have commenced driving the 40 west on this part of the lode, which is worth 6l. per fathom, with a promising appearance. We have intersected a branch in the 50 fm. level cross-cut south, which is 2 in. wide, and containing some very rich ore, with a promising appearance. We have put the men to open on it to ascertain if it is the south lode, which we shall be in a position to say more about in the course of a few days. No other change.

NORTH RETALLACK.—G. R. Odgers, May 14: The No. 2 lode in the adit level north is 2 feet wide, composed of quartz and gossan, and having a rather promising appearance for the depth.

OKEL TOR.—John Rodda, May 14: In the driving south, in the 80, we have intersected two branches, one of them 2 feet wide, containing quartz, capel, flookan, and sulphuric mundic, with occasional spots of ore, but not to value. We consider by the dialling that we are far enough south, and have, therefore, put the men to drive east upon the part of the lode carrying the most water. The lode in the 65, west of Hele's winze, will yield 3 tons of ore per fathom, and is looking very promising for an early improvement. The lode in the winze in the bottom of this level will yield fully as much ore as stated in the last report—11 tons per fathom for its length, 12 ft., but the water during the past week has so much increased as to render our sinking impracticable, until we succeed in letting down the water in the 80. The men are, therefore, put to stope east of

the winze, where the lode is looking very well, and will produce 6 tons of ore per fathom. The three stopes in back of the same level will produce, on an average, about 3 tons of ore per fathom. In the 65 east we are cutting through the lode, which, so far as seen, consists principally of capel and quartz, spotted with ore. Oliver's stope, in back of the 5 east, will yield 2 tons, and Geake's stope 2½ tons per fathom.—North Lode: Treloar's stope, in back of the 80, west of Reynolds's winze, will yield 2 tons of ore per fathom. The cross-cut south, in the 65, is in favourable ground, and good progress is being made. The stope in back of this level, west of the footway winze, will yield from 3 to 4 tons of ore per fathom.

OLD GUNNISLAKE.—H. Rickard, May 11: The following was our setting on Saturday:—Tribute: A pitch in the back of the 81, on the south or Green lode, by two men, for two months, at 9s. in 1l. A pitch in the back of the 91, on the same lode, by two men, for two months, at 9s. in 1l., to pay all cost in making their ore marketable.—Tutwork: The 91 fm. level, on south lode, to clear and lay a tramroad, by six men, at 3s. 6d. per fm., stent 40 fms. The 81 fm. level, on south lode, by six men, to clear, secure, and lay tramroad, at 7s. 6d. per fm., stent the month. A winze in the bottom of the 71, by six men, stent to hole, at 3l. per fm. All the filling and landing in the mine, by three men, for one month, at 10l. 15s., to keep the mine clear of stuff. After the 71, 81, and 91 fm. levels are cleared out more tribute ground will be laid open, which I hope will be nearly completed by the end of this month. We are unable to set the 61 west, on the middle lode, towards Susan's, having two men engaged there clearing stuff and putting in tramroad. We shall commence hauling a good pile of work to-morrow from the back of the 91 fm. level.

OLD WESTMINSTER.—A. Ede, May 13: The lode in the 92, east of Mary Ann shaft, is looking much better, producing lead and blende. The lode in the stope behind the end is producing 12 cwts. of lead ore per fathom. The lode in the Bramnock sump, sinking under the 65, is much as last reported, and producing 1½ ton of lead ore per fathom. The pitch east of No. 1 winze is much the same as it has been for some time past, worth 1 ton of lead ore per fathom. We shall finish putting in the air-pipes to-day. There is no change in any other pitches.

PENHALE UNITED.—Richard Pryor, Henry Bennetts, Joseph Pryor, May 13: Phillips's engine shaft men continue to make good progress, and the shaft will be cleared and drained to the bottom of the mine (90) by the end of this week. Morcom's shaft is cased, divided, and footway put in from surface 7 fathoms below the 50, and the same will be completed to the 60 by the end of this week; this is also being pushed on with all possible speed, in order to reach the 80 fm. level. The tributers continue to draw to surface good piles of silver-lead, which is being dressed as fast as we can get the girls to do so. All our machinery is in good condition, and working well, and all the surface work is going on very satisfactorily.

PENHALE WHEAL VOR.—W. H. Martin, May 13: We continue to have good speed in sinking Hollingsworth's engine-shaft below the 84.—Penhale North Lode: In the 60, west of Holroyd's shaft, the ground is spare for progress, and letting out a quantity of water, lode being 1 ft. wide, producing stones of tin. The winzemen stoping in bottom of the 50 we shall to-morrow put to drive the 50 west end towards the bounder cross-course, and set the stopes on tribute. Little Benjamin's shaft is communicated with the 50, and cased and divided, and now engaged drawing stuff from the 50. We shall commence the sinking below this level by the latter part of the week.

PENHALLS.—S. Bennetts, W. Higgins, May 9: We have completed the pitwork, &c., in the diagonal shaft, and resumed the sinking below the 60 fathom level the early part of this week. In the present bottom there is a small gossan, which, however, does not appear to have shifted the lode much, nor does it appear to have affected the quality of it, so far as seen where just cut through. The lode has not yet been cut in the 60 north, east of the shaft, or anything further discovered in the 60 fm. level cross-cut north, west of shaft. In the 50 west the lode is still mixed with either portions of the cross-course or other slides, but producing good tinstuff, quite as valuable as last reported; we consider this an important point, and a very favourable feature in connection with the western part of the mine. In the rise on the west side of the cross-course we have met with a branch seen in the 40 fm. level cross-cut, which has evidently been thrown up by the gossan, referred to in our last report, a very long distance, and, in all probility, the same kind of heave has occurred with the new lode. There is no material change in any other part. The new whim works well, and the water in the old Pink Mine is forked to about 11 fms. below the adit. In the course of a day or two we expect to take up the eastern adit water, which will enable us to fork faster, especially after we get down in a shorter pool.

PRINCE OF WALES.—May 14: In the 65 east the lode is 1½ foot wide, composed of capel, quartz, and mundic, with occasional stones of copper ore. In the 65 west the lode is 3 ft. wide, composed principally of capel, quartz, and mundic, yielding a little saving work for copper ore—a very promising end. In the 55 east we are driving by the side of the lode, and hope to take it down in the early part of next week. In the 55 west the lode is 2 feet wide, worth full 10l. per fm. Three stopes in back of the 55 are worth on an average 25l. per fathom each. In the 45 east we are driving by the side of the lode. The winze in the 45 west is worth 15l. per fathom. We are progressing favourably with the new shaft.

PRINCESS OF WALES.—G. Rickard: The ground in the north adit level cross-cut, driving towards Prince of Wales main lode, is without any particular change since last week, and if the ground continues favourable for driving we shall intersect the lode some time in next month. We are sinking a trial shaft on the north lode, and find it to be full 2 ft. wide, consisting of capel, iron, quartz, &c.

PROSPER UNITED.—J. Nicholls, May 13: The lode in the 100 east is 3 feet wide, saving work for tin. The stope in back of this level is worth 7l. per fm. The 100 west is unproductive. The 90 west is producing saving work for tin. The 80 west is worth 8l. per fathom for tin and copper. The stope in the back of this level is worth 7l. per fathom for copper. The 70 east is worth 7l. per fm. for copper. The stopes in back of this level are worth 7l. per fathom. The winze in bottom of the 50 east, on Gwallon lode, is worth 5l. per fathom for copper. The 50 east, on Pope's lode, is worth 6l. per fm. for tin. The 50 fathom level west, on Pope's lode, is producing occasional stones of tin. The 50 west, on Gwallon lode, is unproductive. The winze in bottom of this level is worth 4l. per fathom for tin. The 40 west is poor. No change to remark on in either of the cross-cuts. All the machinery is working well.

ROARING WATER.—H. Thomas, May 12: Last Saturday being setting day for the ensuing month, the cross-cut is driven north of the engine-shaft at the 45 fm. level 2 fms. 1 ft., and the cross-cut south at the same level 2 fms. 2 ft.; we have set 1 fm. in the former end, for 5l.; and 1 fm. in the latter end, for 5l. 10s. per fathom. From the unsettled nature of the ground in the north end we are evidently in the broil of Grady's lode, which at present consists of spar, white killas, gossan, and rich bunches of silver-grey ore, and yellow copper ore coated with black oxide of copper; and my opinion is that we shall have to drive 6 or 8 ft. further north before we reach the body of the lode; this we shall accomplish as quickly as possible, and I feel confident of success; as far as we have gone north the ore seems to increase. In the south cross-cut we have just intersected a branch of spar, chlorite, and spots of mundic, and letting out water. The rock is much changed and more mineralised, and from present appearances I expect we shall soon have Smith's lode.

ROSECLIFF AND POLCARNE.—R. Pryor, May 13: We set the following bargains on Friday last:—The 50 to drive east of cross-cut, by six men, at 4l. 5s. per fm.; the ground at this time is a little harder than usual, and spare for driving, in consequense of the end letting out so much water, which is coming from the old mine. The 50 to drive east of cross-cut, on No. 4 lode, by two men, at 2l. 15s. per fm.; the lode is 2 ft. wide, composed of mundic, spar, blende, and spots of lead. The winze to sink below the 30, on No. 4 lode, by six men, at 6l. per fm.; the lode is 2 ft. wide, producing good stones of lead. This winze will be communicated to the 50 in about two months from this time, which will give good ventilation, and no time will be lost in draining the old mine below the 30.

ROSEWARNE CONSOLS.—J. Nancarrow, R. Knuckey, May 13: At our survey to-day the following work was set:—Sarah's shaft to sink below the 30, by six men, at 4l. per fathom; the lode promises to be as good as ever in a little further sinking. The winze east of Sarah's shaft, below the 30, is worth 12l. per fathom, and is set on tribute at 10s. in 1l. The 20 to drive west, by four men, at 2l. 10s. per fathom; here we have a large gossan lode, containing a little grey ore. The 70 to drive south-east on the caunter, by six men and three boys, at 6l. per fathom; the lode is worth 4l. per fathom, is improving, and looks as if it were coming into a course of ore at once. There are four other pitches set to drive at an average tribute of 13s. 4d. in 1l.

SORTRIDGE CONSOLS.—Jas. Richards, May 14: The sinking of Hitchins's shaft (now down 8 fms. below the 140) is progressing satisfactorily, in favourable ground. The lode in the 140 east is 2 ft. wide, and contains a little ore.

SOUTH CONDURROW.—J. Vivian and Son, W. Williams, May 9: In King's shaft, now 5 fms. 4 ft. below the 82, we are sinking through a channel of white granite, which appears to be favourable for the production of metals, and have a small branch of the lode in the shaft; but the main part of the lode is still standing to the south, and may not be seen till we reach the 92 fm. level. In the 82 east the lode is 2 feet wide, composed principally of soft ferruginous quartz. In the 82 west the lode is 3 ft. wide, of much the same character as last reported on, and producing tin worth about 7l. per fathom. In the 71 the lode is about 1½ ft. wide, composed of ferruginous quartz and flookan. In the 71 west the lode is 3 feet wide, composed of tin-capel, which will pay for saving. In the 61 north on the cross-course, east of King's shaft, we have intersected a lode, which appears to be a branch of the middle lode, being about 4 in. wide, and it yields black copper ore and native copper. We are opening east and west of the cross-course on this branch. In the 61, west of King's shaft, the lode is hard, and producing but little tin, whilst passing through an underground channel of rock. In the 51, west of Vivian's shaft, the lode is 2 ft. wide, and of a congenial character for copper, the matrix being principally chlorite, in which we have recently had an increasing quantity of rich yellow copper ore embedded. The stope in the back of the last-named level, east of Vivian's shaft, is producing about 1 ton of copper ore per fathom. In the 20 east, on the middle lode, the lode is 2½ ft. wide, and has decreased in the production of copper, but increased in the production of tin, being now worth 12l. per fathom.

SOUTH DARREN.—J. Boundy, W. H. Boundy, May 11: The different points in operation throughout the mine are looking about the same as when last reported on. All surface operations are going on well. We sampled, on Friday last, 38 tons silver-lead ore, 20 tons best copper, and 28 tons seconds copper ore.

SOUTH HERODSFOOT.—W. Goldsworthy, May 14: We are pushing on the sinking of the engine-shaft as fast as possible. There is no particular change to notice in the ground this week.

SOUTH WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, May 9: The lode in the engine-shaft sinking below the 30 is 1 ft. wide, composed principally of quartz; the ground is of a hard elvan, which we think has squeezed the lode.

ST. JUST AMALGAMATED.—R. Pryor, Wm. White, R. Wearne, May 14: Western Mine—Saveall's Lode: The lode in Saveall's engine-shaft, sinking below the 100, is worth 12l. per fathom. The lode in the 100, east of the shaft, is worth 6l. per fathom. In this level, west of shaft, the lode is worth 5l. per fm. The lode in the 90, east of shaft, is at present disordered by cross heads. The lode in the winze sinking below this level is worth 5l. per fathom. The lode in the 90 west is worth 6l. per fathom; this is the branch which crossed the end referred to in our last report, and is likely to become a separate lode to that we have been driving the level on, which is a very important point. The lode in the 76 west is worth 6l. per fathom. The lode in the winze sinking below the 62, west of shaft, is worth 6l. per fathom.—Owl Lode: The lode in the 40, north of Reddipper shaft, is worth 5l. per fathom. The lode in the 20, north of shaft, is worth 5l. per fathom. The lode in the 10 north is worth 10l. per fathom. The lode in the 20, south of Saveall's lode, is worth 4l. per fathom. There is no change to notice in any other part of the mine.

SUMMER HILL.—W. Wasley, May 14: I am glad to say that the ground in the south-west level has got a little easier for driving, and the flat in the end looking a little more promising for ore; the men will finish their bargain by Saturday evening, when I shall set to them for the remainder of the month. We are getting some nice lumps of ore in the cross level from the south-west level, but not of much value. The flat in the end driving east of the cross-cut, north of Hale's shaft, is of a very kindly nature, and producing some small lumps of ore; the ground is a little harder than it was before, but I think it will improve in about 5 or 6 yards further driving, when we meet with the joint coming from No. 4 shaft.

TAMAR VALLEY.—J. Goldsworthy, May 14: The progress in clearing the adit level south is satisfactory. The surface work through the mine in connection with the preparations for the engine, &c., are in a forward state.

TRELYON CONSOLS.—R. James, E. Pooley, May 13: In the 70, west of new shaft, the lode is yielding tinstuff of low quality, and the level is being driven at 5l. per fathom. In the 70, east of same shaft, a cross-cut is being driven north to cut the north lode, and we have about 5 fms. more to drive to reach it; it is now being driven at 10l. per fathom. In the 60, south of new shaft, the lode is worth 8l. per fathom, and the level is being driven at 10l. per fathom. In the 50, west of Parry's, the lode is worth 5l. per fathom, and the level is being driven at 8l. per fathom. In the 50 east the lode is worth 5l. per fathom, and the level is being driven at 8l. per fathom. Parry's shaft, sinking below the 50, is worth 8l. per fathom. Sixty-eight men are working on tribute, at 13s. 4d. in 1l., at present price for tin.

VIGRA AND CLOGAU.—W. J. Holman, May 14: At No. 5 shaft (No. 2 mine) the men are now driving east and west about 3 fathoms up from the bottom of the shaft, at the junction of clay-slate and elvan, and on the line of gold ground; the lode, which looks most promising, is in the eastern end from 6 to 7 ft., and in the western end 3 ft. wide. The lode in the drivage east from No. 4 shaft has widened out to 3½ feet, and also looks much better. The water and loose rubbish has again been cleared up from the bottom of No. 4 shaft preparatory to sinking. In the rise over the back of No. 1 level, east from No. 1 shaft, the lode is 4½ ft. wide. The stope now being carried forward from the bottom of Old Clogau Mine is without change, as is also Jenny's adit at Vigra Mine. At the reduction-works but little is doing, on account of the short supply of water. By yesterday's post I forwarded you 15 ozs. 6 grs. 15 dwts. of gold. [The above quantity of gold has been received at the offices of the company.]

WEST BRITON.—W. Rosewarne, May 14: Wheal Strawberry Lode: The lode in the 42, west of the cross-cut is 20 in. wide, and looking better, now producing some copper ore. The lode in the 42, east of the cross-cut, is 2 ft. wide, composed of quartz, mundic, and yellow copper ore. The lode in the winze sinking below the 20 is a little disordered at present by a horse of killas, which we expect will soon cut out. We have broken and drawn to surface a very good pile of copper ore this week, and the winze is opening up good tribute ground. The lode in the winze sinking below the adit level, at Wheal Gooseberry, is 2 feet wide, producing stones of copper ore.—Dumpling Lode: The lode in the 42, east of the engine-shaft, is 2 feet wide, producing some rich yellow copper ore. During the past week we have broken some of the best yellow copper ore from this lode I have ever seen. I am glad to say that the mine is looking better, most of the bargains containing copper ore, and I have no doubt with a little more perseverance we shall open up a good mine.

WEST GODOLPHIN.—J. Vivian and Son, John Pope, jun., May 12: Hope Lode: In the 25, driving east of Paull's shaft, the lode is 10 in. wide, saving work for tin—a kindly lode. In the 15, driving east of Paull's shaft, the lode is about 10 in. wide, producing a little tin; this level is very near the cross lode passed through in the 8. The stopes in back of this level have not taken down any lode for the month. In the 8, driving east of Paull's shaft (which is in about 2½ fms. east of the cross lode), the lode is 6 in. wide, worth 2l. 10s. per fathom, and looking kindly for further improvement.—Caunter Lode: The lode in footway shaft, cutting down below the shallow adit, is 15 in. wide, worth 4l. per fm. There is no change in the deep adit to notice. Our tributers are all working very regular, and getting fair wages.

WEST GREAT WORK.—S. Reed, May 13: The great north lode in the 50 east is fully 3 feet wide, producing tinstuff for the stamps. Here we are now under the winze in the bottom of the 40. The lode in the 40 east is worth 11l. per fm. The stopes in back of the level are worth 7l. per fathom. In the 30 the lode is larger, worth 5l. per fathom; and the stope in back is worth 6l. per fathom. The 20, east and west, continues to produce good stamping work. In the stopes the lode is worth 7l. per fathom. In the 8, east of Watson's shaft, the lode is still 4 feet wide, worth 14l. per fathom. The rise and stope west of Watson's are worth on an average 18l. per fathom. At Barn shaft the ground is easier for sinking; lode 2 feet wide, worth 11l. per fathom. The water has not increased during the week in Harvey's shaft, and we are getting on well in sinking. Our four weeks' sale of tin amounted to 465l. 12s. 2d. The pitwork and machinery are in good working order.

WEST KITTY.—W. Vivan, May 13: We are driving the middle adit end and stoping the bottom with six men and three boys, at 8l. 10s. per fathom, and 8s. per ton for tinstuff. The water is rather slack at our stamping-mills, but we are doing all we can to get about a parcel of tin for our next pay.

WEST ST. IVES.—T. Uren, May 13: The mine continues to look well, and the lode in the end is improving considerably for copper. We have begun dressing copper, and shall soon have some ready for the market.

WEST TOLGUS.—May 13: We have resumed the sinking of Taylor's engine-shaft below the 95; the ground is moderately easy, and the men are making good progress. The lode in the 95 east is 7 ft. wide, producing 8 tons of ore per fathom, worth fully 40l. per fathom. In the 95 west the lode is 4 ft. wide, yielding 6 tons of ore per fathom, worth 40l. per fathom; both these levels are looking well, but wet, and rather troublesome for driving. The lode in the 85 west is 4 ft. wide, producing occasional stones of ore, but not to value. In the 85 east the part of the lode that is being carried in the end is 5 ft. wide, yielding 5 tons of ore per fathom, worth 20l. per fathom. The lode in the 75 west is nearly 4 ft. wide, consisting of quartz, mundic, and spots of ore. In the 65 west the men are desuing the lode. The lode in the 50 west is 18 in. wide, producing stones of good ore, and letting out water freely; this end looks promising for improvement. We have four stopes over the back of the 85 working by 24 men, at an average price of 3l. 9s. per fathom; three of these stopes are worth 15l. per fathom, and the other is worth 25l. per fathom. We have two stopes over the back of the 75 working by eight men and two boys, worth on an average 14l. per fathom. We have a kindly-looking lode in Richards's shaft, sinking below the 22; it is 3½ ft. wide, and consists of blende, white iron, spar, and stones of good ore; and, in our opinion, cannot fail to make a bunch of ore shortly. Our prospects are greatly improving.

WEST WHEAL TREMAYNE.—S. Roberts, May 12: I am much pleased to be able to inform you that we have to-day discovered what appears to be a good lode standing in the north side of the engine-shaft. Where seen it is about 9 or 10 in. wide, of strong-looking hard yellow ore, and has a more perpendicular direction than the part or branch in the shaft, so that there is a horse of killas standing against it. We discovered it by cutting in a hole in that direction, and should it continue as now seen it will be a good thing.

WHEAL AGAR.—E. Rogers, May 13; There is nothing new to report.

WHEAL BULLER.—J. Inch, J. Brown, May 13: We are are getting on with the work in Hocking's shaft with all possible speed. There is no alteration in any part of the mine to notice since the last meeting.

WHEAL CREBOR.—J. Gifford, May 12: Since the last general meeting the 120 east has been driven 6 fms., the eastern cross-course intersected and driven through, and the lode cut into on the east side, but not enough has been done to speak of its size and character. The 120 west has been driven by the side of the lode 15 fathoms; the ground is still favourable for driving, and the lode cut into near the end, but not through it: so far as seen it is composed of capel, quartz, and mundic, with occasional spots of copper ore, but of no value. In the 110, east and west of the cross-cut, under Davis's pitch, the lode is 3½ ft. wide, composed of capel, quartz, mundic, and copper ore, yielding of the latter 2 tons per fathom, worth 9l. The ground here is standing whole to the 96 fm. level, 27 fms. long, back to the point where the lode split, and where the level is driven on the north part. From present appearances this shoot of ore dips west, and if it does we shall meet with it sooner in the 120 east; this I consider a very important point. The 96 fm. level cross-cut south has been driven 7 fathoms, and ground not so easy for driving; present price 6l. per fathom. We have three pitches working—one in the bottom of the 96 east (Davis's), by four men, at 12s. 6d. in 1l.; and two in the back of the 84 east—one by two men, at 12s. 6d. in 1l., and one by two men, at 9s. in 1l., and 12s. 6d. per produce. We sampled on May 1 75 tons (computed), and have 30 tons now broken on the mine.

WHEAL FRIENDSHIP.—May 11: Bennett's Lode: In the 170 fm. level, west of flookan cross-course, lode not taken down since last report. We have commenced to rise in the back of the 170 fm. level, to communicate to the winze sinking under the 150 fm. level; the lode in the rise is about 2 ft. wide, producing ⅛ ton of ore per fm. The lode in the winze sinking under the 150 fm. level is 2 ft. wide, producing occasional stones of ore, but not to value. The lode in the 150 fm. level, west of Whitburne's cross-cut, is 2½ ft. wide, yielding ⅛ ton of ore per fm. The stopes in the back of the 150 fm. level will produce 1 ton of ore per fathom. The stopes in the bottom of the 140 fm. level will yield 1 ton of ore per fathom.—Main Lode: The stopes in the bottom of the 70 fm. level will yield 1 ton of ore per fm.; the stopes in the back of this level will produce 1½ ton of ore per fm. The winze sinking under the 40 fm. level is now communicated to the stopes in the back of the 70 fm. level. We have not intersected any lode or branch in either of our cross-cuts since last report.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, May 9: The lode in the new shaft, sinking below the 130, is from 2 to 3 ft. wide, and producing a little tin, but not to value; however, the lode is getting more settled, and looking more kindly. The lode in the 130 west is 2 ft. wide, composed of quartz, gossan, &c., and yielding stamping work. At the 120 west we have taken down more lode in the western end; the lode altogether is 2½ ft. wide, and worth 20l. per fathom. In the eastern end we have intersected a "breast head," where there is a rich leader of tin, 1 in. wide; we should like to break through this breasthead before we place a value on it, as it is a little disordered. There is a good branch of tin going below this level, worth 30l. per fathom, which in 3 fathoms sinking will form a junction with the main lode; and hence we think the probabilites of finding a still better lode below are great. The men are making good progress with the driving of the 110 fm. level south towards the new lode, the ground being of a soft elvan. The lode in the 100 west is from 3 to 4 ft. wide, and worth, by assay, 15l. per fathom. The lode in the 90 east is 4 feet. wide, worth 8l. per fathom. The lode in the 90 west is 2½ ft. wide, worth from 7l. to 8l. per fathom; the ground being easy, this lode will come away at from 10s. to 11s. in 1l. The lode in the 80 west is 4 ft. wide, and worth 8l. per fathom; this is also opening out good tribute grouud. There is no other change to notice. We are busy sampling tinstuff and dressing.

— G. R. Odgers, W. Bennetts. May 14: We have been all through this mine to-day, and we cannot see any change to report since our advice of Saturday. The ground in the 110 fm. level cross-cut north is very favourable for driving, but we have not yet met with any lode. We have not yet driven as far as we had calculated upon. Everything is progressing very favourably.

WHEAL KITTY (Uny Lelant).—Wm. Rosewarne, May 14: South Russoe Lode: The lode in the boundary shaft, sinking below the 40, is worth for the length of the shaft (9 ft.) 10l. per fathom. The lode in the 40, west of the shaft, is worth 6l. per fathom. The lode in the 40, east of the shaft, is worth 5l. per fathom. The lode in the 40 fm. level end, west of the winze, is worth 5l. per fathom.—North Russoe Lode: The lode in Bolitho's shaft, sinking below the 150, is worth for the length of the winze (9 ft.) 9l. per fathom. The lode in the 150, east of Bolitho's, is worth 4l. per fathom. The lode in No. 4 winze, sinking below the 140, is worth 4l. per fathom. The lode in the 110, east of the cross-cut, is opening tribute ground.—New Lode: The lode in the 140, east of the cross-cut, is opening tribute ground.—North Gowan Lode: The lode in Bolitho's shaft, sinking below the 10, is producing a little tin. Nothing intersected in the cross-cuts during the past week. The pitches are producing the usual quantity of tin.

WHEAL KITTY (St. Agnes).—S. Davey, Wm. Polkinghorne, May 9: In the 82, driving west of Holgate's shaft, the lode is much the same as last reported, and producing good saving work for tin.—New Shaft, Pryor's Lode: In the 94, driving south of shaft, we have met with a branch, which we believe to be the north part of the lode; it is letting out a large quantity of water; we hope to cut through it in the coming week, when we shall be able to give more particulars. In the 82, driving east of shaft, the lode is worth for tin 8l. per fathom. In the 82, driving west of shaft, the lode is 2 ft. wide, and worth for tin 18l. per fathom. In the 65, driving west of shaft, the lode is 2 ft. wide, and worth for tin 6l. per fathom. In the 44, driving east of shaft, no lode has been taken down during the week.—Caunter Lode: In the 82, driving north of Pryor's, the lode is 2 ft. wide, and yielding good work for tin—a kindly lode.—Vottle Lode: In the 24, driving east of cross-cut, the lode is 2 ft. wide, worth for tin 5l. per fm.

WHEAL MARGERY.—R. James, May 13: In the 165, west of the American, the lode is rather poor. In the 165 east the lode is worth 7l. per fathom. In the 155 east the lode is worth 4l. per fathom. In the 155 west the lode is worth 4l. per fathom. The tribute throughout is about the same as it has been.

WHEAL TRELAWNY.—W. Johns, T. Grenfell, J. Pryor, May 13: The driving of the 220 cross-cut, as well as the sinking of Trelawny's engine-shaft, are going on very satisfactorily, and all by appearances the cross-cut end cannot be far distant from the capels of the lode. In the 210, south of Trelawny's shaft, we have not taken down any lode since last reported, worth 7l. per fm. In the same level north we are in disordered ground; consequently water is coming more freely from the end than hitherto, and we have made an attempt to sink a winze in the bottom of the 196, and no doubt we shall be able to succeed, and set the same on tribute instead of tutwork. Nothing has been done in the shape of taking down the lode in the 210 north and south of Smith's, neither in the winze sinking below the 196, north of Chippindale's, neither do we intend to until we have advanced a few fathoms further by the side of the lode. We sampled on the 6th inst. 50 tons (computed) of crop lead ore, and shall again sample on Tuesday next two parcels, Nos. 1 and 2, computed 98 tons.

WHEAL UNY.—S. Coade, M. Rogers, May 9: There is no change of importance to report on this week. We have sold this day 13 tons 8 cwts. 2 qrs. 27 lbs. of black tin, at 54l. 15s. per ton.

FOREIGN MINES.

EL CHICO.—April 7: Since my last I have received 54 cargas of ore into the hacienda for reduction. The ground in the mine is a little harder, but something over a vara may be driven per week. A copious spring bubbles up from the bottom of the level near the end, which is now about 9 varas distant from the place of El Torno shaft. From present appearances it seems that we are gradually beginning to see ores of a better quality as the adit end progresses eastward; this end is at present on the part of the vein abounding in metallic produce. The pure lead ores give 3 marcs, those of blende and spar 4½ marcs, a sample of coppery ore gave 6¼ marcs, and one of this sort, with what appeared to be dark sulphuret, has given 17 marcs, and a part of the same stone has on it some native silver, so that to secure whatever produce might be worth returning I have ordered a shed to be put up at the mouth of the adit, and have appointed a "velador," who will also have to break up and sort the different classes of ore as they are brought out. When a sufficient quantity of each kind has been collected, and their ley ascertained by new assays, it will be advantageous to reduce those of 6 marcs and upwards. It is evident that the vein is altering its character as we approach the point where above the old mine it began to be very productive. This much I will say, that a more promising-looking vein cannot be seen.

JAVALI.—Most satisfactory news has been received from this mine, both from the manager, Col. Maury, and one of the directors, Mr. Allington, now out there. The new machinery was all but completed, and was expected to be at work in April; labour was abundant, and large quantities of good ore had been accumulated near the new mill. Pollock's Tunnel had been driven ahead 23 yards, and the timbering of the whole of Seemann's shaft had been finished, so that ore in the Sorocco need no longer be carried to the surface on men's heads. The "nail" discovered in the Nispero workings had been followed down, and turned out to be somewhat more important than was at first expected.

NEVADA LAND AND MINING COMPANY.—Advices have been received by this company that operations on the Whitmore Mine have been recommenced. Negociations have also been opened by the directors of the Central Pacific Railroad for obtaining 120 acres of land belonging to this company on the Truckee river, for the purpose of placing there a station and depôt, and also as a town site. This will, probably, form the principal depôt of the railway between San Francisco and Salt Lake city. The station will be about 1½ mile distant from the Nevada Company's mill.

VAL ANTIGORIA.—T. Roberts, May 2: In the shaft sinking under the 30 fm. level No. 1 lode is considerably improved. No. 1 winze, sinking under the 20, is going through a productive lode, worth about 4 tons of ore per fathom, yielding 15 dwts. of gold per ton. On No. 2 lode, in the 20 north, the lode is at present very regular, and well defined, carrying good walls; a trial of this ore by the native mills yielded 1 oz. of gold per ton. All other points are without change. We shall make another gold remittance during the present month. We are making great progress with the construction of the establishment. The winding-machinery is in its place, and will be ready for work when the water-wheel and water-course are finished, which will we expect be the case during July. The construction of eight new amalgamating-mills is also progressing, the houses for six of them being almost completed. Several of these mills will be ready for amalgamating operations by the time the hoisting and crushing machinery is completed, in July, when an increase of gold produce will immediately take place.

CAPULA.—Captain Paull, April 8: With regard to the work done towards the erection of the hacienda below the adit, up to the present it consists in laying open the ground for the two wheels, stamps, tanks, calcining-furnaces, &c., the greater part of which we have had to blast, and also levelling the ground for the launders to convey the water from the adit. In 1867 we did very little, owing to the very disturbed state of the country, want of labourers, funds, &c.; we have a large quantity of lime on hand, and plenty of stone, and should have finished the first wheel-pit ere this if we could have procured sufficent masons. We have timber for the two water-wheels. The gudgeons we have ordered from Apulco Foundry. The arm-head plates, bolts, &c., we can make at the mine; there are stamp-heads to be had from Encarnacion Ironworks. Up to the 28th ult. the whole cost of the hacienda amounted to $475. If we could get the men to work we might finish the first wheel, with stamps, &c., in about three months, with the two barrels to the small wheel that I mentioned about in my letter of the 8th ult., but we cannot depend on the men working two days in succession. No. 2 torta, of 130 cargas (instead of 122, as I mentioned in my former letters), was washed last week, and produced 228 marcs 6 ozs. (1830 ozs.) of silver, which was sent to Mexico yesterday by the Real del Monte Company's conducta. Torta No. 3, of 112 cargas, is incorporated; the assay is not yet made, but I expect it is equal to the last. The Englishmen broke 36 bags of rich ore from San Jorge stopes last week, and brought it to surface. The pitwork is nearly all in order, two penthouses put in the shaft, stays for rods, &c., in order, launders for taking down the upper water to the launders in the adit. The engine and boiler-houses are up and roofed, the bed of the boiler tubes built, and also the foundation of the stack; bricks burnt for the flues, and a large quantity more made. The engine is in the house and fixed. This week we should have put the boiler together, but we are short of both red and white lead to make the joints. We are also short of steam, feed, and exhaustion pipes. The carpenter is making the patterns to have them cast at Apulco. As long as we can get the metal beneficiated at San Cayetano, and the barreteros work on, we shall not require any money from England.—Finance: We have a balance of nearly $2000 in Messrs. Lascurain and Co.'s hands, without including the value of the silver sent this week.

WEST CANADA.—Captain Plummer, April 1: Huron Copper Bay: The stope east of Palmer's shaft, below the 30, yields from 2 to 2½ tons per fm. On the east and west, below the 20, the stopes yield 2½ tons per fm. each, and on the east of Stephen's winze 2 tons.—Bray's Shaft: The 60 is poor, and we do not expect an early improvement. The winze below the 50 yields from 1½ to 2 tons per fathom. The 30 east has improved, and looks very promising to continue. The stope below this level yields 2 tons per fm. The lode in the winze below Carmichael's stope has also improved.—Wellington Mine: The lode in the 40, west of Crase's shaft, is still poor. The 40, west of Stephens's winze, contains a large lode, but is not rich in copper. The stope below the 24, east of Mitchell's, yields 2 tons, and below the 36 it is not so good. The 36, going east, yields 2 tons per fm. The stope on the east of Hooper's yields 2 tons per fm. Rowe's shaft yields also 2 tons, and promises to improve. The level going west of this, towards the dyke, has also improved.—Bruce Mines: Trial's Shaft: The lode is much smaller and poorer than when last reported, but no change has taken place in the stope. The 12, going east of Taylor's, looks promising, but going west the lode is broken into branches, and is much disordered. The lode in the rise and and stope seems to be improved. The small steam-engine that we removed here for the purpose of driving the fan-blast is now employed for pumping, and it answers remarkably well. The dressing and all surface work is going on well.

PESTARENA.—T. Roberts, J. Mitchell, T. Warne, J. Roberts, May 1: The amalgam obtained from the three districts up to this day has been smelted, and yielded 31,836 grammes of fine gold, equal to 1025 ozs. The gold will be remitted to the office to-morrow, in 10 ingots. This production is very satisfactory, considering the delays we have had to contend with on account of the extraordinary scarcity of water in the Anza, which has greatly interfered with the working of the machinery at Pestarena, and of the native mills in the Marmazza Valley. For the past 30 years there has not taken place here a similar scarcity of water. Within the last few days the water has, however, much increased, so that at Pestarena we have a full supply for the machinery, and at Val Toppa we have water for running 125 of the small native mills. The water is still daily increasing, and in the course of a few days we hope to have all the mills at work.—District of Pestarena: Peschiera: The principal stopes in the 75 fathom level maintain their rich quality, worth 100l. per fm. The engine-shaft is now sinking below this level. The new stopes in the bottom of the 46 fm. level south are looking extremely well, at present yielding 10 tons of ore per fm., worth on an average over 1 oz. of gold per ton; these stopes have a decided appearance to become yet more productive. We have a strong opinion of this ground, which is going towards the Pozzone Mine; in this level, towards the Aquavite Mine, we are opening up a considerable length of profitable stoping ground.—Aquavite Mine: The lode in the engine-shaft has improved. The end driving southward in the 33 yields 8 tons of ore per fm., worth about 1 oz. of gold per ton. The stopes in the bottom of the 23 fm. level yield 14 tons of ore per fm., worth 1½ oz. of gold per ton. The ends driving north and south in this level yield 6 tons of ore per fm. The Morghan tramroad is progressing rapidly, the contractor having now a great force employed on it. Several other surface improvements are in progress, some of which will be very quickly completed.—District of Battiglo: At the mine, the lode in the stopes in the bottom of Piazza Nuova level is 4 ft. wide, worth ½ oz. of gold per ton. The lode in the back of Cavetta level is 1½ ft. wide, worth 1 oz. of gold per ton. The lode in the bottom of this level is 1 ft. wide, worth 15 dwts. per ton.—At the Establishment: The casting furnace will be completed during the coming week. The pit for the slime deposit will also be finished this month.—District of Val Toppa: From the ends started on the new lode from cross-cut we are extracting ore, which gave by a trial made this week with the native mills 2½ ozs. of gold per ton. We are now continuing to drive this cross-cut on a flat course, which yields also ore worth 2½ ozs. of gold per ton. We are of opinion that this will lead to another part of the lode. Since our last we have reached, by a cross-cut 25 fms. back from the first cross-cut, the new lode (12 fms. from the quartz lode), and have cut into it about 3 ft. As soon as we have struck the footwall a trial of the ore will be made, when we believe it will be found equally as rich at this point as at the first cross-cut.

The lode in the winze sinking under No. 4 level is of a great width; we are carrying at present 9 ft. of it. A trial of the ore from this winze gave over 1 oz. of gold per ton. From these new discoveries hardly any ore has yet reached the establishment; as it will come forward daily now, and as the season has now fully set in, a considerable increase of our gold productions may be looked for.

Projected New Companies.

Company.	Capital.	Shares.	Each.
Mold Mining	£30,000	6000	£5
New Dale Mine	5,000	5000	1

NEW DALE MINE, 5000*l.*, in 5000 shares of 1*l.* each.—The objects for which the company is established are to purchase the lease and machinery belonging to the Dale Mining Company (Limited), now in liquidation, and to work the mines and ground comprised in such lease. The Memorandum is signed by—JOSEPH BARTRUM, Gresham-street West, 400; J. G. FANSHAWE, Halkin-street West, Belgrave-square, 400; THOMAS NORRIS TIMOTHY, Castle-street, Reading, 50; THOMAS WELLS, Russell-street, Reading, 50; THOS. SMITH CURTIS, Wellingborough, 200; JAMES WALMESLEY, Fenchurch-street, London, 400; CHARLES JAMES BIGGS, 5, Blenheim Cottages, South Hackney, 1. The directors may, with the sanction of a special resolution of the company previously given in general meeting, increase its capital by the issue of new shares. The sum of 125*l.* a year shall be allowed to the directors for their remuneration, to be divided between them in such proportion as they determine, but the company may, at their discretion, at any general meeting increase such remuneration.

MOLD LEAD MINES, 30,000*l.*, in 6000 shares, of 5*l.* each.—The object for which this company is established is the carrying on, as successors to, and in substitution for, the Mold Consolidated Lead Mining Company (Limited), heretofore established under the Companies Act, 1862, the business carried on by that company. The Memorandum is signed by—THOMAS WELSBY, Northgate-street House, Chester, 1; THOMAS JOSEPH PERRY, Manor House, Ettenhall, near Wolverhampton, 1; T. ROSE, Merredale-grove, Wolverhampton, 1; C. GRAY, Church-street, Bilston, 1; THOS. SUTTON SMEETH, Wellington-street, Bilston, 1; EBENEZER POWELL, the Manse, Holt, near Wrexham, 1; EDWARD HUNTER, the Glebe, Blackheath, 1. The number, qualification, and remuneration of the directors may be from time to time fixed by a general meeting, in accordance with the company's regulations, but, until otherwise fixed, the number of directors shall not be less than three or exceed seven; and it shall be requisite for every director to be and continue the owner of 100 shares at least. The first directors shall be THOMAS BANLOCK, T. J. PERRY, T. WELSBY, and E. HUNTER.

NATIONAL PROVINCIAL BANK OF ENGLAND.—It will be seen by the proceedings at the annual meeting of this institution (as reported in another column), that the operations during 1867 had resulted in a nett profit of 226,119*l.* (after making allowance for bad and doubtful debts, and bonus of 10 per cent. to officers). The dividends declared during the year amounted to 21 per cent. upon the paid-up capital. In the last nine years the amount paid in dividends and bonuses has been 1,400,000*l.*, much more than the capital of the Bank.

NEW CLIFFORD MINE.—The reports upon this property by Messrs. Matthew Greene, John Goldworthy, and John Kendall, published in another column in this day's Journal, will be highly interesting to the shareholders. The machinery and plant are in excellent order. The engine, a 50-inch cylinder, works admirably; the buildings at surface are of the most substantial and serviceable kind and the mine quite free from debt, so that the raising of mineral will enable them at once to declare dividends. Capt. John Goldsworthy reports that the mine contains within its limits the same lodes as exist in the rich mines of the surrounding district—Tresavean, Penstruthal, Bell and Lanarth, and other lodes, and bounded west by Comford, Tresavean, and other mines on the north by Ting Tang, &c., and on the eastwards by the Gwennap United Mines, which is now a part of the Clifford Amalgamated Mines. He is of opinion that by prosecuting the 50 fm. level cross-cut north and south the intersection of the lodes will be crowned with success. Capt. John Kendall reported that, seeing the same favourable indication as in the adjoining mines that made the lode so rich, there is reason to believe that the lode when intersected in this mine will also be good, and it is his opinion, and also the opinion of all practical miners of the neighbourhood the mine is situated in, that it will be a very profitable one in depth.

PENDEEN CONSOLS.—Capt. Richard White writes on the 14th:—"I am glad to say the lode in the engine-shaft is getting redder, and has a very promising appearance for tin. Also at the 142 north, in driving the north side of the Great Pendeen lode, we find a branch gone off north producing stones of copper; this is, no doubt, a part of the Pendeen lode. We shall say more about it in our next report."

ROYAL COPPER MINES OF COBRE.—A special general meeting will be held on Monday, when, according to the circular issued, the shareholders are to take into consideration a report from the directors in reference to the resolutions passed at a former meeting. It is understood that the resolutions refer to the scheme noticed in the Journal of Feb. 22, in regard to which some alterations are proposed. In consequence of the improvement in the copper market it has been stated a smaller amount of new capital than originally named will be required.

MINING NOTABILIA

[EXTRACTS FROM OUR CORRESPONDENCE.]

CARGOLL MINE.—The 87 tons of ore referred to by the agents in their report, presented at the general meeting on April 28, and noticed in the Journal of May 2, was sold at the time mentioned, and realised upwards of 1400*l.*

EMILY HENRIETTA continues every day to be an increasing feature of importance in mining in West Cornwall, and is indeed exceeding even the sanguine expectations of its supporters. The 60 fm. level end east still continues as good as ever, worth 35*l.* per fm., and is as likely to continue so as on the day it was first cut. The 70 east is letting out such large quantities of water that its driving is rather slow, but it is steadily improving, and may be expected to be into the rich ore ground in a week or ten days, when probably the shares will double in price. On the whole, no new mine has opened out with such prospects for some years, and the excitement of its success is tending to throw quite a new life into mining in the Redruth and Camborne districts.

BWLCH CONSOLS.—The operations in this mine are going on as usual. The stopes are producing their usual quantity of ore. In the 70 fathom level we have cut lodge, and are preparing to drive west. On Saturday next we shall sample 50 tons of ore.

WHEAL MARY HUTCHINGS.—It must be very gratifying to the shareholders to find this mine turning out so well—4500*l.* worth of tin having already been sold; the last parcel, about 6 tons, the produce for April, realising 58*l.* 12s. 6d. per ton, and the depth does not exceed 20 fathoms from surface. The agent has recently purchased a new wheel, 50 ft. diameter and 6 ft. breast, to be employed in pumping, the present wheel to be entirely devoted to carrying on additional stamps. These operations are progressing satisfactorily, and over 70 hands are now employed.

The copper ore from the Cape of Good Hope is now sent direct to Swansea from the Cape in sailing vessels, instead of being sent to England in the Cape mail packets, and from thence to Wales. The Cape Copper Mine is increasing in value.

CHIVERTON MOOR.—On visiting this mine this day (May 14) I was agreeably surprised to see the fine stones of lead coming from the new north shaft, and also the lead from the 75 west, which is 2 fathoms sooner than cut in the level above. I feel indebted to your correspondent of a few weeks since, who advised making enquiries, or seeing the mine, before selling. I find no call will be required at the next meeting. I also hear a capital account of the agents and manager of the mine.

SOUTH HERODSFOOT.—No greater anomaly in the mining market could be pointed out than the position occupied by South Herodsfoot Mine. It may be confidently asserted that there are few progressive mines in Cornwall whose prospects are greater, and to all appearances so certain and immediate. That these statements are not exaggerated may be inferred from the following facts:—1. It lies south, and in close contiguity to Herodsfoot Mine.—2. In the latter mine all its levels extending southwards, and now nearing South Herodsfoot boundary, contain rich silver lodes.—3. South Herodsfoot is fully 97 fms. deep, and on reaching the 100 the lode will be cut, which, from appearances in the levels above, and the improved character of the ground at the bottom of the shaft, the captain is sanguine will prove rich. There can be little doubt that in a few weeks South Herodsfoot will occupy a very different place from what it does at present.

WHEAL TRELAWNY has recently much improved, and the long run of rich silver-lead ore in the bottom level (some 60 to 70 fathoms in length), will soon be laid open to increase the returns. The last three months' sales of silver-lead ore was 176 tons, realising 3450*l.*, and the present three months' sales will be about 220 tons. The shares in this mine, now at 8*l.* 10s. to 9*l.*, are very low, once at 45*l.* to 55*l.* The mine adjoins Wheal Mary Ann, on the same rich lodes.

CEFN BRWYNO.—Capt. J. Paull (May 13) reports—Saturday last being our setting-day, the following bargains were set:—The 92 to drive east by six men, at 6*l.* per fm.; the lode is 18 in. wide, containing a little ore, but not of much value at present. The same level west, by four men, at 7*l.* 10s. per fathom; the lode is 3 ft. wide, producing good stones of ore occasionally. The ground here is very hard, consequently the progress is rather slow, but from indications we shall soon open out some good ore ground. The 80 east is set to four men, at 7*l.* 7s. 6d. per fm.; the lode at this point has greatly improved, and has a fine appearance, now producing 25 cwt. of lead ore per fm. The same level west is set to four men, at 7*l.* 10s. per fathom; this end is in a strong, hard lode, composed of spar, blende, and clay-slate, with good branches of lead ore, and likely to improve. The 56, or deep adit level east, is set to four men, at 6*l.* per fathom; the lode here is 3 ft. wide, of a very promising character, containing good strings of lead ore, with every prospect of speedily opening out good ore ground as extended eastward. The cross-cut north in the 20 is set to four men, at 5*l.* per fm. The ground here consists of a good killas, and presents a very promising appearance. The dressing is commenced, and will be pushed on as fast as possible.

EAST BROOKWOOD.—Shareholders at a distance have long been dissatisfied with the management of this mine—doubted its proximity to Brookwood Consols, and some of them even doubted its very existence. Messrs. Teague and Co., of Ashburton, have recently inspected the property, and their report satisfies them on these matters. The disunited local shareholders, it appears, have alone been the cause of so much discontent, and of bringing the mine into great disrepute. As, however, they seem inclined to unity of action, the remunerative points may soon be reached.

PENHALE UNITED SILVER-LEAD MINING COMPANY.—Operations at these mines are progressing satisfactorily. In the course of a few weeks a parcel of from 20 to 25 tons of silver-lead will be sold, and the bottom level is expected to be reached in about 10 days.

NORTH LEVANT.—By the reports from this valuable property it appears that the prospects continue of the same cheering nature as hitherto, and the operations are being carried on with energy. The discovery of the new lode, mentioned in a recent Journal, continues of the same richness.

CRENVER AND WHEAL ABRAHAM (Crowan).—The proprietors of these mines, with their friends, met at the account-house, on Friday, to audit the accounts and receive the reports of the agent; the latter were of the most favourable nature. The copper ore samplings have very materially increased, as may be seen by the following statement:—There were sold at the Ticketing of Dec. 12, 95 tons; Feb. 13, 103 tons; April 9, 264 tons: and in all probability there will be at least 350 tons ready for the usual bi-monthly sale, on June 11. There has been, of course, considerable outlay to produce such good returns, but there is no doubt the proprietors will be well rewarded for their spirited proceedings in developing this important concern. At present there are more than 300 persons employed in this mine. What an advantage this is to the mining population of the district.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, MAY 15, 1868.

COPPER.	£	s.	d.	£	s.	d.
Best selected..p. ton	83	0	0-	85	0	0
Tough cake and tile	81	0	0-	83	0	0
Sheathing & sheets.	84	0	0-	88	0	0
Bolts	83	0	0-	—		
Bottoms	88	0	0-	90	0	0
Old (Exchange)	70	0	0-	—		
Burra Burra	84	10	0-	85	0	0
Wire.....per lb.	0	1	0-	0	1	0½
Tubes	0	0	11½	1	0	

BRASS.	Per lb.
Sheets .....per lb.	9d.-10d.
Wire ..... „	8½d.-9½d.
Tubes ..... „	10½d.-11d.
Yellow Metal Sheath.p. lb.	7½d.-8d.
Sheets ..... „	7 d.-7¼d.

SPELTER.	Per ton.					
Foreign on the spot.	£20	5	0-20	7	6	
„ to arrive ..	20	5	0-20	7	6	
ZINC.						
In sheets	£26	0	0-	—		
TIN.						
English blocks	98	0	0			
Do., bars (in barrels)	99	0	0			
Do., refined	101	0	0			
Banca	96	0	0			
Straits	93	10	0			

TIN-PLATES.*	Per box.					
IC Charcoal, 1st qua.	1	6	0-	1	10	0
IX Ditto, 1st quality	1	12	0-	1	16	0
IC Ditto, 2d quality..	1	4	0-	1	7	0
IX Ditto, 2d quality..	1	10	0-	1	13	0
IC Coke	1	2	6-	1	3	6
IX Ditto	1	8	6-	1	9	6
Canada plates, p.ton..	13	10	0-	—		
Ditto, at works	12	10	0-	—		

* At the works, 1s. to 1s. 6d. per box less.

IRON.	Per ton.					
Bars Welsh, in London	6	5	0-	—		
Ditto, to arrive	6	2	6-	6	5	0
Nail rods	6	15	0-	7	0	0
„ Staffd. in London	7	7	6-	8	10	0
Bars ditto	7	5	0-	9	10	0
Hoops ditto	8	2	6-	9	15	0
Sheets, single	8	15	0-11	0	0	
Pig No. 1, in Wales ..	3	15	0-	4	5	0
Refined metal, ditto..	4	0	0-	5	0	0
Bars, common ditto..	5	10	0-	5	15	0
Do. merch. Tyne or Tees	6	10	0-	—		
Do., railway, in Wales	5	10	0-	5	15	0
Do., Swed. in London.	10	0	0-10	5	0	
To arrive	10	0	0-10	5	0	
Pig, No. 1, in Clyde ..	2	12	9-	2	16	6
Do. f.o.b. Tyne or Tees	2	9	6-	—		
Do. Nos. 3, 4, f.o.b. do.	2	6	6-	2	7	0
Railway chairs	5	10	0-	5	15	0
„ spikes	11	0	0-12	0	0	
Indian Charcoal Pigs, in London p. ton..	7	0	0-	7	10	

STEEL.	Per ton.					
Swed., in kegs (rolled)	14	5	0-	—		
„ (hammered)	14	15	0-15	0	0	
Ditto, in faggots	16	0	0-	—		
English, spring	17	0	0-23	0	0	
QUICKSILVER (p. bottle)	6	17	0-	—		

LEAD.	Per ton.					
English Pig, com.	19	7	6-	—		
Ditto, LB	19	12	6-	—		
Ditto, WB	21	5	0-	—		
Ditto, sheet	20	5	0-	—		
Ditto, red lead	20	15	0-	—		
Ditto, white	27	0	0-30	0	0	
Ditto, patent shot	22	10	0-22	15	0	
Spanish	18	15	0-19	0	0	

REMARKS.—No important change has taken place in the Metal Market during the past week, and its position remains much the same; if anything, matters are a little better, though the improvement continues to make but slow progress. Still business is more active than it was, and there appears no reason why it should not become much more enlarged, as there are many circumstances which combine to encourage the prosecution of commercial business upon an energetic and improved basis, more especially as there is now every prospect that peace will reign over the continent of Europe for some time to come. Confidence also is now becoming much more extended, and purchases bearing a speculative character are gradually creeping into the market, which may be expected to increase as business assumes a more lively appearance. The Money Market has again resumed its former condition, and at present there does not appear any immediate prospect of any change being made in the Bank rate of discount, which still remains at the low rate which has now continued for so many months; consequently facilities are still offered for those operations which depend greatly upon a low rate of interest being secured. It is probable that we shall now soon hear of the decision of the American Senate on the impeachment of the President; but it is very questionable whether the excitement caused by this trial will cease with the decision, whatever that may be, or whether it may not become even greater than it now is. It would be very satisfactory to see quietness again restored to that country, and to have our commercial relations once more placed upon the active and favourable footing upon which it once stood.

COPPER.—The advices by the Chili mail report the charters to this country for the fortnight to be 1080 tons. The market continues steady, and about 1500 tons of Chili ore and regulus have been sold at 16s. per unit. In Wallaroo a large business has been done, amounting to upwards of 200 tons at 83*l.* cash, and 83*l.* 5s. prompt 14 days. English tough cake, however, remains without improvement. A new brand of Australian copper, said to be equal to Burra, has lately been introduced into the market: it is called Bremer—cake copper, and a parcel has been already sold at 82*l.* per ton. The present quotation is 82*l.* 10s. per ton; no sales during the present week.

IRON.—In Staffordshire the improvement which was reported at the beginning of the quarter cannot be said to continue; even the strike of the puddlers does not cause any great accumulation of orders. There are a few railway contracts in the market, but the South Staffordshire makers are not receiving very many orders of any sort. Many of the puddlers continue to refuse to return to work at the reduction, but others have gone in, and unless liberal aid is forthcoming from other districts the strike will soon be at an end. In Welsh nearly every branch of the trade shows great quietness, but one or two of the establishments are rather better employed, in consequence of increasing exports to the United States. Russian engagements are gradually coming to hand, but not for such quantities as to warrant it being said that a large business is done. From the other continental markets the enquiry remains without any material alteration. The Belgians are competing for all continental contracts with a keenness hitherto unknown. Home buyers are making some advance in their purchases, but there is still a want of vitality in the trade. The railway companies, although they have, in many instances, heavy requirements, are buying cautiously, and will not, probably for some months, be in a position to enter the market freely. In Swedish iron a very fair amount of business is still doing. In Scotch pig-iron the market still continues rather inanimate, and only a very moderate business has been done. The last price received from Glasgow was 52s. 3d. cash.

LEAD.—The market continues quiet, but prices still tolerably firm.

TIN.—Straits remains much in the same condition as last week, only a limited amount of business being done. Some small sales have taken place at 93*l.* 10s. cash, which may now be considered the quotation, and at which there are still sellers.

SPELTER continues without animation, and transactions are very limited. The nominal price on the spot remains without alteration.

TIN-PLATES.—Quotations are firmly maintained, and the demand is still pretty good.

STEEL is in rather better request. QUICKSILVER without change.

THE COPPER TRADE.—Messrs. Vivian, Younger, and Bond (May 15) write—Transactions in Chili bar copper have been on a small scale this week, and a few lots have been parted with out of second hands at a moderate figure to realise profits, importers, however, maintaining a very firm attitude. About 200 tons of bars have been sold at 77*l.* and 77*l.* 10s., whilst a parcel of 50 tons refined ingots were let go at 79*l.* 10s. On the other hand, furnace material being scarce, ores and regulus have commanded a higher figure, nearly 2000 tons having realised 16s. per unit, at which holders are very firm, with little indeed offering. The regular mail from Chili confirms last week's anticipations as to charters of copper produce during the second fortnight of March month, which consist of 735 tons of bars and ingots, and 345 tons of fine in ores and regulus—in all 1080 tons. Including the present mail, therefore, the advices of charters which have reached this country for the past four months have amounted to 10,570 tons of fine copper, against 15,150 tons for the previous four months. Little business has been done in English raw, but at the close smelters have sold 200 tons at 83*l.* for tough, and 85*l.* for best selected. About 150 tons of Wallaroo fetched 83*l.*, but there are not eager buyers at the price. On the whole, it would appear that a very moderate demand for copper must improve its value.

Apart from the settlement of the fortnightly account on Thursday, there has been very little doing in the MINING SHARE MARKET this week, and prices have not materially varied. The standard for copper ore again declined on Thursday, though this week the fall is only 12s. The shares mostly dealt in have been West Chiverton, Prince of Wales, Marke Valley, Chiverton Moor, Chontales, North Crofty, Wheal Chiverton, Great Wheal Vor, Great Laxey, Wheal Grenville, East Grenville, Emily Henrietta, Wheal Seton, Great Retallack, and a few others. West Chiverton shares have been firmer, and leave off 64 to 65; the meeting, we understand, will be held about the 29th instant, and a dividend of 2*l.* per share declared. At the bottom of Batters's shaft a branch has been met with, worth, so far as seen, 15*l.* per fathom, and it is thought to be one of the north lodes, which has been so productive in the upper levels; the 110 west, when last cut through, was valued at 80*l.* per fathom; the 100, east of No. 1, is worth 20*l.* per fathom; the 100 west, 30*l.* per fathom; the 100, west of Burgess's, is worth 20*l.*; the 100, west of No. 3 winze, 40*l.*; the 100, east of No. 2 cross-cut, is worth 20*l.* per fm.; the 90, west of No. 2, 10*l.*; the 90 east, 25*l.* per fathom; the 90, west end, is worth 15*l.*; the 80, west of Batters's shaft, on the north lode, is worth 15*l.* per fm.; the 70 west, 15*l.* per fm. Chiverton Moor, 6¼ to 6⅝; Clifford Amalgamated, 5¼ to 5½; Cook's Kitchen, 10½ to 11¼. Devon Great Consols, 445 to 455; at the annual meeting, on Tuesday, the accounts showed 14,064*l.* in favour of the company, and a balance of assets over liabilities of 101,309*l.*; the ores raised during the year were 1300 tons less than the previous year, but the improved price of it had enabled the directors to declare the same amount of dividends—40,960*l.* The reserves in the mine are now estimated at 64,620 tons, which, at 5*l.* per ton, would make them amount to 323,100*l.* Drake Walls, ½ to ¾. Prince of Wales shares have fluctuated between 50s. and 52s., and leave off 48s. to 50s.; the lode in the 65 west is 3 feet wide—a very promising end. No other change. East Grenville shares have been flatter at 32s., but leave off 34s. to 36s.; the lode in the shaft is from 20 inches to 2 feet wide, and worth 4 tons of good copper ore per fathom, and looks better, the agent thinks, for a continuance. East Lovell, 7⅞ to 8¼; at the meeting a dividend of 10s. per share was declared.

Chontales Gold, 2¼ to 2½; the advices by Mr. Belt, dated April 6, state that the steam-engine had been successfully removed to San Domingo, and it was hoped the stamps (to render the company independent of water-power) would be at work early in May, when the reduction of the ores at the upper mines will be commenced. The gold remitted this time, though none was expected, is 191 ozs. We understand that Mr. Belt's general report is favourable for early profits from the upper mines (which we believe consist of Consuelo, Estrella, San Antonio, Trinidad, San Felipe, and San Domingo; and it is at the latter that the steam-stamps for crushing the produce of this group of mines has by this time gone to work. The other mines belonging to the company are at some little distance, adjoining the Javali, and consist of the Pavon and Conception; and the Pavon alone Mr. Belt values at 30,000*l.* East Caradon shares advanced to 5, and leave off 4½ to 4¾; the ends on the caunter lode are worth 12*l.* per fathom; south lode, 5*l.*; and Child's lode, 25*l.* per fm. At Grambler and St. Aubyn meeting, held on Tuesday, the accounts showed a balance against the company of 522*l.* 18s. 8d., and a call of 1*l.* (486*l.*) was made. The loss on two months' working to the end of March was 323*l.* 3s. 3d., the sales of ore being tinstuff only, of the value of 44*l.* 11s. 6d. The report states that the lode has been cut in the 48 cross-cut, driving north of the engine-shaft, and opened upon 2 feet; the lode is from 9 to 12 inches wide, and by opening on it the agents hope to to see it become productive. East Russell, ¾ to 1; Frontino and Bolivia, 10s. to 12s.; Great Laxey, 16¾ to 17¼; Great Retallack, 2 to 2½; Great Wheal Vor, 15½ to 16¼; Herodsfoot, 38 to 40; Marke Valley, 6¾ to 7; North Chiverton, 4 to 4¼; North Crofty, 2¼ to 2½; Emily Henrietta, 39 to 41; East Seton, 10s. to 12s. 6d.

New Lovell, 17s. 6d. to 20s.; Caldbeck Fells, 12s. to 14s.; North Treskerby, 17s. 6d. to 20s.; Providence Mines, 27 to 28; South Caradon, 395 to 405; South Frances, 18 to 20; Stray Park, 2 to 3; Tincroft, 14 to 15; West Caradon, 5 to 6; West Seton, 200 to 210; Wheal Buller, 8 to 9; Wheal Chiverton, 2 to 2½; Wheal Grenville, 33s. to 35s.; Wheal Margaret, 5 to 6; Wheal Mary Ann, 21½ to 22½; Wheal Trelawny, 8½ to 9; Wheal Uny, 2 to 2¼.

An active business continues to be transacted in Mining Shares on the Stock Exchange. St. John del Rey and Chontales have proved the chief features, and have fallen 3*l.* 10s. and 10s. per share respectively, on receipt of adverse advices. Rossa Grande and Anglo-Brazilian, on the other hand, have been in demand, at enhanced values. Great dissatisfaction and doubt prevails in consequence of the directors of the St. John del Rey Company, after the lapse of so long a time, not having convened a meeting of the shareholders in the present emergency. The following are the closing prices:—St. John del Rey, 16 to 17; Don Pedro, 2 1-16 to 2 3-16 prem.; Anglo-Brazilian, 3-16 to 5-16 prem.; Rossa Grande, ⅛ to ¼ prem.; Pestarena, ⅜ to ⅛ dis.; Chontales, 2⅛ to 2⅜; Anglo-Italian, par to ¼ prem.; Frontino and Bolivia, ½ to ⅝, ex call; Central American, ¼ dis. to par; Sao Vicente, ¼ to ½ prem.; Yudanamutana, 1⅞ to 2⅛; Alamillos, 1¾ to 2; English and Australian Copper, ⅜ to ⅝. In British Mines there has been a moderate amount of business doing, and prices have been barely maintained. West Chiverton shares are, however, very steady, and in demand at 64 to 65; the various points of operation are maintained in value, and in sinking Batters's shaft a north lode has been met with, worth 15*l.* per fm., and is an important feature. Great Laxey shares are 16¾ to 17; Chiverton Moor, 6½ to 6⅝. Chiverton, 2¼ to 2½; in the cross-cut driving north a great stream of water has been cut, and it is thought that they are nearing an important lode; there are other points of operation of great promise. Great Vor, 15½ to 16¼, having partially recovered from their great depression. New Lovell Mine is favourably reported on. Caldbeck Fells have risen to 12s., 14s. (35s. paid, and only 5s. further liability); it is stated that profits are being made, and in going west an important improvement is reported. Prince of Wales, 49s. to 51s.; Minera, 165 to 175, ex div.; Glan Alun, 7s. to 8s.

IRISH MINE SHARE MARKET.—The fine weather here, and encouraging accounts from the Continent respecting the prospects of the various crops, as well as the expectation of large arrivals of gold in England, have exercised a favourable influence on the Government Funds, but the continuance of stagnation in the several Irish and English trades has had the effect of lowering the recent tendency to a revival of speculative business, and, therefore, among others, mining securities have also appeared rather flat these last few days, buyers showing disinclination to pay the recent high advances in the respective prices, and holders, on the other hand, seeing no legitimate grounds for making concessions. We had, therefore, only a limited amount of business, closing at the following quotations:—Mining Company of Ireland shares (7*l.* paid), 19*l.* 5s. each, leaving off firm. Wicklow Copper (2*l.* 10s.), 14*l.* 5s. for cash and account; in request. Connorree (20s. paid), from 4s. 6d. to 4s. 9d. At the adjourned meeting of shareholders of the Connorree Mining Company, held on Saturday last, Mr. Flavell, on behalf of the Committee of Inspection, reported that 5000*l.* would be all that was required to complete all matters relative to present and future operations. That the lodgements on account of this loan amounted to about 2400*l.*, which, with promises from directors and some 36 shareholders, would bring the amount up to 4242*l.* 10s., leaving only a balance of about 757*l.* 10s. yet to be provided for. He said he could not too strongly impress on all who have promised to contribute, as well as on those who have not, how essential it is for them to make their lodgements before the end of the week. He reminded the meeting that all who pay up 5s. per share will be entitled to 10 per cent., and that the 5000*l.* are for five years, bearing 7 per cent. interest, and will remain a first charge on the mine. The debentures, he said, when issued will be as sale-

able in the market as the shares are. Mr. Greer, the liquidator, reported that everything was going on at the mines most satisfactorily. He had reduced the debts to the miners from 250*l.* to 130*l.*, without touching an ounce of the ore in stock at the time of his entering office, though there was such a quantity that he would gladly give 1000*l.* for it. He had not touched a shilling of the company's assets, and all the money he paid was at his own risk. On the motion of Mr. Macready, the meeting then passed the following salutary resolution—"That the money which has been subscribed for the resuscitation of the mines shall not be handed over to the trustees until a legal resolution has been passed by the new board to give debentures for the amount, and bearing the 7 per cent. promised," and then adjourned for another week, this day.

The WEST BRITON MINING COMPANY, which was formed about twelve months since for working the Crowan Consols Copper Mines, has issued its prospectus for the placing of 1000 new shares of 1*l.* each. The mines were abandoned by the former proprietors through want of sufficient capital; and the present adventurers secured the setts, and all the machinery, including a 48½-in. pumping engine, two boilers, pitwork, &c., and all the benefits of an expenditure of over 12,000*l.*, for the nominal sum of 1250*l.*, and in addition to the Crowan Consols the adventurers have lately secured the adjoining Wheal Curtis Mine, the Square's Sett of which, in former workings, almost paid the whole cost of the mine. Mr. Jehu Hitchins reports that the sett, as pointed out to him, is unusually extensive and well situated, being in a celebrated mineralised district to the south of and adjoining the Binner Downs and Crenver and Wheal Abraham Mines, which have yielded such immense profits, and are on parallel lodes for a great length; the dues, of 1-24th, he considers most liberal. He concurs mainly with the reports submitted to him, which recommend these properties as a very good speculation, and likely, with a fair amount of capital and good economic management, to become profitably productive.

The SCOTTISH CHIEF SILVER MINING COMPANY, with a capital of 100,000*l.*, in shares of 2*l.* each, proposes to purchase and work the Forest and Argent Mines, in Mount Bullion, Alpine mining district, California. The property consists of nine well-defined lodes of 1500 feet on six lodes, and 2000 ft. on three lodes, in all 15,000 ft., forming one of the most extensive mines in the district. The general average of the mines of the district may be estimated at 20*l.* per ton of ore; but as machinery for extracting the metals from the ores improves, and the workings become deeper, that yield will greatly increase, for it is found that the deeper the mines are the richer they become. By the latest advices from Monitor, it appears that they have struck a lode in the Pennsylvania Mine, about 1½ mile south of the company's mines, which yields $700 to the ton, and that same lode appears to run through the company's claims. The I. X. L. Mine, a parallel lode to the Pennsylvania, is yielding ore which sells at 20*l.* per ton at the mine. This fact affords an incontestable proof of the richness of the Scottish Chief Mines, which are on the same range of lodes. The district is well supplied with wood and water, labour is in abundance, and the climate is all that can be desired. The mines can be worked by a tunnel, which saves the expense of sinking shafts, and raising the ore and water by machinery, which will effect a saving of 50 per cent. on the cost of working. As this tunnel will cut the mines at a great depth, an unusually large yield of gold and silver may be expected from the ores. A contract has been entered into with a responsible party for cutting the tunnel 1400 feet in length for the sum of 4000*l.* Money has been sent out to commence the work, and it is now in progress.

At Redruth Ticketing, on Thursday, 1719 tons of ore were sold, realising 7689*l.* 18s. The particulars of the sale were:—Average standard, 112*l.* 5s.; average produce, 6½; average price per ton, 4*l.* 9s. 6d.; quantity of fine copper, 110 tons 16 cwts. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Apr. 9....	1827	£122 16 0	5¾	£4 7 0	15s.1d.	£75 13 0
„ 23....	4004	117 12 0	6½	4 16 6	15 0	74 19 6
„ 30....	1726	109 18 0	7¼	5 5 0	14 5	72 1 6
May 7....	2063	110 13 0	6⅞	4 16 0	14 1	70 8 0
„ 14....	1719	112 5 0	6½	4 9 6	13 10½	69 8 0

Compared with last week's sale, the decline has been in the standard 12s., and in the price per ton of ore about 1s. Compared with the corresponding sale of last month, the decline has been in the standard 7*l.*, and in the price per ton of ore about 8s.

At the Devonshire Great Consolidated Copper Mining Company meeting, on Tuesday (Mr. W. A. Thomas in the chair), the accounts for the year ending Feb. 29 showed a credit balance (after payment of 40,960*l.*, or 40*l.* per share, in dividends) of 14,064*l.* 9s. 2d. The directors' report stated that the quantity of ore raised has been less by about 1300 tons, and the quantity of fine copper contained in the ore about 106 tons less, the price, however, obtained for it having been 5*l.* 7s. 2d. per ton of fine copper more, and the total expenses 3200*l.* less, the directors have been enabled to declare the same amount of dividends—40,960*l.*, which, considering the unabated depressed state of the mining and metal markets, must be admitted to be matter of congratulation. Details will be found in another column.

At the East Pool Mine meeting, on Monday, the accounts showed a credit balance of 758*l.* 1s. 2d. A dividend of 640*l.* (5*l.* per share) was declared. [The agents' report is among the Mining Correspondence.]

At East Wheal Lovell meeting, on Tuesday (Mr. H. Rogers in the chair), the accounts for the five months ending Jan. showed a credit balance of 1108*l.* 0s. 3d. The profit on the five months' working was 1027*l.* 12s. 9d. A dividend of 953*l.* (10s. per share) was declared, and 155*l.* 0s. 3d. carried to credit of next account. Messrs. Quentrall and Peters reported upon the various points of operation. The mine is looking remarkably well throughout, and never presented a more permanent appearance.

At Nangiles Mine meeting, on Tuesday, the accounts for the three months ending Feb. showed a debit balance of 903*l.* 8s. 9d. A call of 15s. per share was made. Capts. J. Rowe and J. Rowe, jun., reported that their cost was that day increased by having new pitwork to sink, and an increased number of men to sink the engine-shaft.

At North Roskear Mine meeting, on Tuesday, the accounts for the two months ending March showed a debit balance of 1057*l.* 9s. 3d. A call of 1*l.* 10s. per share was made. Capts. Vivian and Angove reported that they are now in a position to give an effectual development to the copper ground at Pearce's shaft, by means of which they have reason for expecting soon to be able to place the mine in a much better position than it has occupied for a long time; but they will not begin to feel the full benefit until they have sunk to the 216 fm. level, and fairly laid open the ground for stoping. This, however, will be done rapidly, the lode being easy for opening through.

At North Wheal Chiverton quarterly general meeting, to be held on Thursday next, the accounts will show—Labour cost, &c., for the three months, 748*l.* 16s. 6d.; and a cash balance of 1735*l.* 7s. 3d. The ground sunk and driven during the three months is 30 fms. 1 ft. The average cost of driving levels for the three months is 3*l.* 13s. per fm., and the average earnings of the tutworkmen is 3*l.* 13s. 7d. per man per month.

At the Scottish Australian Mining Company meeting, yesterday (Mr. A. W. Young in the chair), the report of the directors was received and adopted, and a dividend declared at the rate of 8 per cent. per annum, free of income tax. Power was given to the directors to create 30,003 shares of 1*l.* each, to be offered *pro rata* to the existing shareholders. Details in another column.

At the Yudanamutana Copper Mining Company of South Australia meeting, on Tuesday (Mr. H. Hills in the chair), the report of the directors was received and adopted. Details in another column.

At the Anglo-Italian Mining Company meeting, on Thursday, Mr. H. Haymen (the Chairman) stated that the company has not yet acquired any property, but since the issue of the report has received samples of mineral from Italy, which, upon assay, have given extraordinary results. Details elsewhere.

At the New Quebrada Company meeting, to be held on Thursday, the report of the directors, to be submitted, states that differences having arisen between the board and the contractors for the railway, the latter have demanded a recourse to arbitration for their settlement, a demand with which the directors have complied, and arbitrators have accordingly been nominated. The chief points of the report of the committee of conference will be found elsewhere.

The Bank of England return for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT a decrease in the "notes issued" of 240,620*l.*, which is represented by a corresponding decrease in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there was shown an increase in the "public deposits" of 645,950*l.*, in the "rest" of 5986*l.*, and in the "seven day and other bills" of 13,009*l.*, together 664,945*l.*, and a decrease in the "other deposits" of 148,011*l.*=516,934*l.*, and deducting therefrom 152,083*l.*, the increase in the "other securities" on the asset side of the account, there remains a total increase in the reserve of 364,851*l.*

On the Stock Exchange the following prices were officially recorded during the week in British Mining Shares:—Great Laxey, 17; Great Wheal Vor, 15½, 16, 16¼; Wheal Mary Ann, 21½, 22⅛; Herodsfoot, 38; East Caradon, 4⅜, 4½; North Wheal Crofty, 2¼; Chiverton, 2 1-16th; Tincroft, 13¼. In Colonial Mining Shares the prices were:—Cape Copper, 11⅜; Port Phillip, 1⅛, 1½; Vancouver, 4¼; Yudanamutana, 1⅞; Scottish Australian, 1 1-16th. In Foreign Mining Shares the prices were:—St. John del Rey, 19¼, 18¼, 19, 17½, 18, 16¾; Chontales, 2 1-16th, 2⅛, 2⅜, 2¼, 2⅜; United Mexican, 1⅛; Don Pedro, 2 1-16th, 2 2 3-16ths, 2⅛ prem.; Frontino and Bolivia, ⅛; Rossa Grande, 1-16th prem.; Anglo-Brazilian, ¾.

COAL MARKET.—The fresh arrivals this week only number 47 ships. The market has ruled dull throughout, but prices remain the same, and the market is entirely cleared. Hetton Wallsend, 17s. per ton; Haswell Wallsend, 16s. 6d.; Heugh Hall Wallsend, 16s.; Eden Main, 14s. 6d.; Tunstall Wallsend, 14s.; Hetton Lyons Wallsend, 14s.; Hawthorn Wallsend, 13s. 6d. Unsold, *nil;* 65 ships at sea.

At the European Assurance Society annual meeting the following results of the past year's business were shown:—The premiums on the new life and guarantee policies issued during the year amounted to 40,271*l.* 10s.; the fire premiums on new business for the three quarters of a year (this branch of business having discontinued in September last) amounted to 14,993*l.* 11s. 6d.; the total premiums on the new business of the year were 55,265*l.* 1s. 6d.; the gross amount received in premiums during the year was 373,250*l.* 5s. 3d.; the life, fire, and guarantee claims paid during the year were, including bonus additions, 238,051*l.* 15s. 11d. The progress of the society's premium revenue continues satisfactory, it having reached 363,250*l.* in 1867, as against 349,143*l.* in 1866.

At the Millbay Soap, Alkali, and Soda Company (Limited) annual meeting (Mr. Joseph Wills in the chair), a dividend of 6 per cent. per annum, free of income tax, was declared for the past year. Messrs. Richard Rundle and George Clarence were re-elected directors, and Mr. A. P. Prowse auditor.

At the Otago and Southland Investment Company (Limited) meeting, the available balance amounted to 3039*l.*, and a dividend was declared at the rate of 10 per cent. per annum, free of income tax, making, inclusive of a previous payment, 10 per cent. for the year.

LEAD ORES.

Date.	Mines.	Tons.	Amount.	Purchasers.
May 5—	Maes-y-Safn	140	£12 5 0	Mining Co. of Ireland.
9—	Prince Arthur	34	14 0 0	Treffry's Executors.
—	ditto	12	9 0 6	ditto
11—	Frongoch	32½	11 5 0	Runcorn Smelting
—	ditto	32½	11 5 0	Panther Lead Co.
—	ditto	65	11 7 6	ditto
—	East Darren	75	15 13 0	ditto
—	Goginan	35	16 10 0	ditto
—	Cwm Erfin	26	15 16 6	ditto
—	ditto	26	15 13 6	Stock and Co.
12—	Isle of Man Mining Co.	100	14 3 6	—
14—	Talargoch	45½	13 1 6	Walker, Parker, & Co.
—	ditto	111½	13 13 6	ditto
—	Bryn Gwiog	35	12 11 6	ditto
—	Trelogan	23	12 17 6	A. Eyton.
—	Great Rhosesmor	36	12 3 6	ditto
—	Holywell Level	40	11 5 6	ditto
—	Parry's	6	11 6 6	ditto
—	Pennant	6	11 5 6	Walker, Parker, & Co.
—	Wagstaff	18	10 17 6	A. Eyton.
—	Pwllgwenllan	7	11 8 6	Walker, Parker, & Co.
—	Mount Pleasant	5	11 5 6	A. Eyton.
—	Cwmllanerch	25	11 7 6	P. Glover.
—	ditto	5	13 11 6	A. Eyton.
—	Wheal Trelawny	50	24 5 6	Bury Port Co.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
May 12—	Trelogan	160	£ 3 15 0	Kenrick and Son.

BLACK TIN.

Date.	Mine.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchaser.
May 9—	Wheal Uny	6 11 2 7	—	£361 4 11	—
—	ditto	6 17 0 20	—	376 7 8	—

COPPER ORES.

Date.	Mines.	Tons.	Amount p. ton.	Purchasers.
April 17—	Caldbeck Fells	3½	£19 18 6	Bibby, Sons, and Co.
—	ditto	6½	9 0 0	ditto

COPPER ORES.

Sampled April 29, and sold at Tabb's Hotel, Redruth, May 14.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Prosper United	108	£2 15 0	East Carn Brea	24	£1 2 6
ditto	86	1 5 6	ditto	30	4 0 6
ditto	80	1 5 6	ditto	27	2 19 0
ditto	78	2 10 0	Botallack	45	11 6 0
ditto	67	3 2 6	ditto	28	11 14 6
ditto	64	4 18 0	ditto	25	7 14 0
West Basset	55	4 2 0	Bampfylde	93	12 16 0
ditto	50	3 3 6	ditto	3	2 15 6
ditto	44	4 12 6	Copper Hill	63	1 9 0
ditto	41	7 1 6	ditto	29	6 17 6
ditto	37	3 17 6	Levant	32	6 9 6
Wheal Margery	68	1 13 6	ditto	25	12 3 6
ditto	62	1 13 6	ditto	24	5 9 0
ditto	42	4 16 6	Wheal Buller	29	4 15 6
ditto	41	4 8 6	Camborne Vean	24	3 19 6
East Rosewarne	54	3 17 6	West Briton	13	2 7 6
ditto	42	6 3 0	ditto	4	5 10 0
ditto	38	5 4 6	West Tremayne	11	2 5 0
ditto	36	2 15 0	ditto	6	7 19 0
East Carn Brea	38	4 0 6	Wheal Harmony	6	3 0 0
ditto	37	3 18 6			

TOTAL PRODUCE.

Prosper United	483	£1226 12 6	Copper Hill	92	£ 290 14 6
West Basset	227	1021 4 0	Levant	81	642 7 6
Wheal Margery	213	691 16 6	Wheal Buller	29	138 9 6
East Rosewarne	170	765 2 0	Camborne Vean	24	95 8 0
East Carn Brea	166	536 16 6	West Briton	17	52 17 6
Botallack	98	1029 6 0	West Tremayne	17	72 9 0
Bampfylde	96	1198 14 6	Wheal Harmony	6	18 0 0

Average standard..... £112 5 0 | Average produce 6⅛
Average price per ton £4 9 6
Quantity of ore ..... 1719 tons | Quantity of fine copper..110 tons 16 cwts.
Amount of money..... £7689 18 0
LAST SALE.—Average standard..... £110 13 0—Average produce..... 6⅞
Standard of corresponding sale last month, £122 16 0—Produce, 5¾.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	624¼	£1838 1 4
Freeman and Co.	92	418 9 0
Sims, Willyams, and Co.	35	374 1 6
Williams, Foster, and Co.	246	952 19 0
Mason and Elkington	433½	2225 11 4
Bankart and Sons	93	1190 8 0
Copper Miners' Company	24	95 8 0
Charles Lambert	170¾	594 19 10
Total	1719	£7689 18 0

Copper ores for sale at the Royal Hotel, Truro, on Thursday next.—Mines and parcels.—Devon Great Consols 1833—Marke Valley 464—Wheal Crelake 235—Bedford United 208—East Caradon 175—West Maria and Fortescue 138—Prince of Wales 136—Wheal Friendship 125—Gunnislake (Clitters) 110—Wheal Emma 104—Devon and Cornwall 104—Wheal Crebor 75—East Russell 74—Belstone 44—Holmbush 37—East Gunnislake and South Bedford 32—Caradon Consols 28.—Total, 3922 tons.

Copper ores for sale at the Royal Hotel, Truro, on Thursday week.—Mines and parcels.—South Caradon 597—Clifford Amalgamated 505—Glasgow Caradon 263—West's Ore 177—Phœnix Mines 164—Wheal Rose 161—North Treskerby 156—Poldice Mines 140—Craddock Moor 120—West Caradon 97.—Total, 2380 tons.

Notices to Correspondents.

CHONTALE S.—If I were a holder of royalty shares I would most heartily and at once practically support the proposition that, by the payment of 1*l.* 10*s.* per share, my interest should be classed in the same category as the ordinary shares; but, on the other hand, as a holder of ordinary shares, it is clearly my interest to oppose any such proposition to the utmost of my power. The mines may, and no doubt will, prove very profitable—in fact, if they pay not more than 15 per cent. per annum upon the subscribed capital for some few years to come the holders of the ordinary shares would have no cause to complain. Holders of ordinary shares should not forget that they are entitled to the whole of the nett profits up to 15 per cent. per annum upon the subscribed capital, *after* which the royalty shares are entitled to participate in the residue. So that, as one of your correspondents has recently observed, the ordinary shares, as compared with the royalty shares, are practically a preferential stock, bearing an interest of 15 per cent., payable out of the first profits. Is it likely, with such a permanent advantage as this, that the holders of the ordinary shares will allow it to pass out of their hands, or rather diffuse it over a larger area of capital, which would be the case by admitting the royalty shares to participate *pari passu* with the ordinary shares?—A HOLDER OF ORDINARY SHARES.

BURNING HYDROCARBON OILS.—"C. D. K." (Liverpool).—There appears to be no resemblance whatever between the inventions of Messrs. Wise, Aydon, and Field and of Mr. Thomas Crow. According to the first-named invention, the oil is burned by igniting it when converted into spray, but in that of Mr. Crow the oil is converted into gas before burning; he claims that he maintains a constant and regulated supply to the vapouriser, in passing through which the oil is converted into vapour and superheated, and in its superheated state it passes to the burner, in which it is consumed in the form of vapour. A coil of piping suitably pierced with holes forms at once the retort, supply-pipe, and burner, so that all that is requisite is to carefully regulate the flow of oil, to permit of its conversion into vapour or gas in the quantity necessary to give the desired length of flame. Mr. Crow places the entire apparatus in the mouth of the central flue of a boiler, and proposes to raise the steam without any complicated arrangements.

SCALE FOR ADVERTISEMENTS.—To avoid the necessity of frequent application, we may state that our charge for general advertisements is—for six lines and under, 4*s.*; per line afterwards, 8*d.* Average, ten words per line.

*** With last week's Journal a SUPPLEMENTAL SHEET was given, which contains:—Lectures at the Royal School of Mines (remarks thereon by Mr. N. Ennor)—The Shropshire Coal Fields, No. IV., by Mr. John Randall, F.G.S.—On Boiler Explosions, No. II., by "M. E."—Nitro-Glycerine and Dynamite, by Capt. W. Hoskin—The New Blasting Agents—Lead Smelting—Preparation of Magnesia employed as a Refractory Material, by Mr. C. H. Dowling—Improvement of Iron and Puddled Steel by an Alloy with Wolfram, by Messrs. A. Keiffenheim and Co.—The Darien Canal, No. XIX., by Dr. E. Cullen—Mineral Resources of La Plata States—Mining in Mexico—Mining on the Rhine, No. 1—Our Commercial Position: Trading Companies as a Medium of Investment—The Progress of Mining as a Science and Source of Commercial Wealth—The New Quebrada Company—St. John del Rey Gold Mining Company, &c.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, MAY 16, 1868.

SOUTH STAFFORDSHIRE: ITS PAST AND FUTURE.

Much has been written in the past few years as to the present condition and future prospects of South Staffordshire, as one of the leading iron-making districts of the world. It is described as little short of *effete;* and its not very remote prospects analogous to the existing state of the Wealdon iron field. The assumption has a very depressing influence within that district; and outside it, in financial circles in particular, an effect seriously prejudicial to its vast interests results. By the general public the decadence of such a hive of industry is looked upon as little short of a national disaster. Consolation, if not compensation, however, is understood to be found in the fact that the Cleveland district especially has assumed a position in regard to the iron trade to which South Staffordshire can never again hope to attain. As for South Staffordshire, it is asserted that its day is gone, and that there is nothing left for it but gradually to dwindle into insignificance.

But what has been the position of South Staffordshire for the last 20 years—since, in fact, the great railway mania of 1845, when South Wales and itself enjoyed a monopoly in the manufacture of rails? Money was then made so easily in South Staffordshire that almost any person entering the iron trade, even without any previous knowledge of it, and certainly devoid of the qualifications requisite for becoming a successful ironmaster in ordinary times, was able to obtain a fortune. The result of this non-competitive state of things was to introduce great laxity of management, and a very low state of practical science amongst those by whom the trade was conducted. Owing to their comfortable circumstances, there was an indifference to what was going on in other districts; and their lethargy developed into sound sleep. It was not till the disasters of 1857 that they received the first of the surprises by which they are being now aroused. Since that date they have been in a state of something like astonishment—wondering how it is that their position is so much altered. Gradually the truth is being realised, and they are now perceiving that it is owing to the competition of other districts, and prominently to that district by which it is intimated it is to be superseded.

Let us now enquire what was the state of the Cleveland district in 1852. The Cleveland district started by smelting pig-iron out of an ironstone that hardly any South Staffordshire man would have thought at all worthy of his attention. The early efforts were by no means encouraging. It took 35 cwts. of the best coke in the kingdom to produce 1 ton of pig-iron, scarcely saleable at any price, for it was unfit for foundry purposes, and it could not be used in the manufacturing of finished iron. But see what is now being done in the Cleveland district. Out of that same ironstone, and with only 19 cwts. of coke, a class of iron is being produced of first-rate quality for foundries, which is largely used in the mills and forges of South Staffordshire, and which the makers themselves and their neighbours transmute into the finished article, and vend it in markets hitherto chiefly supplied by South Staffordshire firms. How has this great change come about? By putting forth every effort that first-class engineering or chemistry can place within their reach, by going to considerable outlays in improved works, and by using the greatest freedom in imparting, each to all, for the benefit of the entire district, any knowledge which, put into practice, has proved a better method of extraction or manipulation.

All this while what has South Staffordshire been doing? It has made scarcely any improvements in relation either to the consumption of fuel, nor has it made much progress in the smelting of ironstones newly discovered and of unascertained worth. It is true that the leading masters there are just beginning to utilise the gases from their blast-furnace heads; but beyond that we can scarcely point during the last ten years to a single improvement in that district, either in the blast apparatus arrangements, or in those of the mill and forge department. The district seems so totally unacquainted with the value of chemistry, that in the whole range of ironworks of South Staffordshire and East Worcestershire there is not, so far as we are aware, a chemist attached to any one of the establishments. So behindhand is South Staffordshire in mechanical appliances, that there is not a single blast-furnace plant which could be transferred to the Cleveland district and there be used so as to be made to pay, even within 25 per cent. of a profit. It may well be asked—Can this state of things be rectified? Our reply is in the affirmative. It is true that South Staffordshire is in the position of having everything to learn, but, happily, it has a good margin of savings, which by energy, skill, and science may be used in the placing of the district in the position by which it ought always to have been characterised. South Staffordshire must adopt the appliances which are giving life and vigour to the new districts. In the North of England there are furnaces to which the mineral is brought from a distance exceeding that between the Northampton district and the furnaces in South Staffordshire. Yet, owing to their superior mechanical arrangements, the Northern ironmasters are able to produce pigs at so low a rate that, to the extent of between 200 and 300 tons a day, they are sending them to the mills and forges of South Staffordshire. If the new appliances are adopted in South Staffordshire, the ironmasters there may, with the immense beds of ironstone lying within their own radius, place themselves in such a position as that within a few years they may be able to send their iron to the mills and forges of the North. The ironstone beds in Northamptonshire are much richer than the average of those in the Cleveland district, and the product can be delivered to the furnaces of South Staffordshire at a price below that at which some of the Cleveland ironmasters are paying for their stone. It is true that the coal used in South Staffordshire is not so highly charged with carbon as is that supplied to the Cleveland masters, which is a disadvantage to South Staffordshire; but, on the other hand, if properly constructed furnaces should be used, the ironstones of Northamptonshire are more easily fused than those of Cleveland.

We look, therefore, to the energies of the South Staffordshire masters being directed to this field; and we have no fear but that, if proper mechanical appliances are introduced, although there may, possibly, be a few mistakes, accompanied with partial failures, in acquiring the requisite skill, yet that in a few years South Staffordshire may certainly supply itself with a large quantity of very good and very cheap mine iron, which, when mixed with a small proportion of that made elsewhere, will produce a finished article that shall maintain the high reputation the district long ago acquired. For it must not be forgotten that the ironstones of Northamptonshire are hematitic in their character, and, therefore, of the nature of those from which the finest irons are produced, although we may not have yet acquired a knowledge of the best means of manipulating them. Their earthy mixtures are found now in various beds to contain such proportions of alumina and silica as when properly used result in an aggregate mixture chemically equal to that from which the best South Staffordshire iron has hitherto been produced.

Respecting the manipulating of the pig-iron, one of the reasons of the backwardness in the mechanical departments of the mills and forges of South Staffordshire is to be found in the extraordinary superiority of the coal of that district for the uses of the puddling furnace—a superiority surpassing that found in any other part of the world. And this advantage—whatever may have been said to the contrary—South Staffordshire cannot be deprived of, during a period embraced in all ordinary calculations. Nevertheless, we trust that the possession of such fuel will not lull its owners, but that they will economise its use in every department.

With a cheap mine iron, which we can foresee will before long be produced in South Staffordshire by the makers in that district following the examples set them by the Northern masters, and with reasonable economy in the mills and forges, there is no reason why South Staffordshire should hang down its head. Indeed, it is our belief that as the Northamptonshire ironstones can be smelted more cheaply in South Staffordshire than elsewhere, and as we have no doubt of their capability to produce good steel, South Staffordshire may be made to take that rank in producing steel also which shall make it play as important a part in the future of the iron trade as it has played in the past, and become, even as a steel district, second neither to Sheffield nor to any other in the kingdom.

ENDLESS WIRE-ROPES FOR COLLIERIES.

The introduction of endless wire-ropes for doing away with horse-power in drawing coal along inclines is just now exciting a good deal of interest in South Yorkshire, where the experiment has been tried at one of the largest collieries in the district, and with the most successful results. For the purpose of making the system more generally known, Mr. PLATTS, the manager of the Wharncliffe Silkstone Colliery, where the ropes have been put down, on Friday last invited a number of colliery proprietors and mining engineers to inspect the mode of working the ropes. Amongst those present were Messrs. P. COOPER, R. PEASE, W. MADDISON, MILLER, WALKER, STACEY, &c. After making the necessary preparations the party descended to the thin, or Parkgate, seam, which is only about 87 yards from the top. Here was laid down an 18-in. cylinder engine worked by steam with FOWLER'S patent clip-pulley, winding corves along a level 700 yards in length, having three branches. On the second branch there was a train of 12 corves, each containing 7¼ cwts. of coal, and on the third a train of 32 corves, all travelling along at the rate of fully four miles an hour. There was also a return train of 48 corves, worked by means of a double-acting steel rope, ¾ in. diameter, and which went over the entire distance of 700 yards in seven minutes. This was the first attempt made in introducing the endless ropes, and so satisfactory was it deemed by the proprietors and manager that it was determined to put them down in the highest seam. For that purpose, as was pointed out by Mr. PLATTS, a 16-in. diameter air-cylinder was attached to the steam-engine, driving the air a distance of about 400 yards, to a point where there are a pair of small engines worked by compressed air, which winds by the clip-pulley and endless rope along 400 yards of road. To the last-named engines is attached a drum worked by friction-gear, winding from two stations, the first being 200 yards on the dip, and the second 350 yards on the dip. A plunge-pump, 4 in. in diameter, is worked by the compressed air for raising the water to the level. The whole of the machinery was minutely examined by the gentlemen as they proceeded along, and all were impressed with the value of the system, which even in an economical point of view alone was admitted to be highly advantageous. Proceeding to the principal pit, the No. 2 Silkstone, there was found an engine of 40-horse power, with two cylinders for drawing the corves along what may be termed an irregular road 1050 yards in length, with three gradients, one-third of the distance rising 1 in 30, another third about 1 in 7, the remainder being level. At 600 yards from the engine is placed some other machinery, made by Messrs. FOWLER, of Leeds, the patentees of the clip-pulley, so arranged as to be capable of pulling the corves from any and every direction required. It is worked in rather a peculiar manner, by means of a drum friction-gear and mitred wheels, and acts admirably.

In addition to the machinery noticed, Mr. PLATTS has invented a movable pulley, which, fixed near to the clip, always keeps the ropes quite tight. Everything, including the ropes, having been examined by the party, all the members of which were practical men, the unanimous opinion was that the endless ropes drew the corves quicker and more economically than could be done by horse-power. So satisfactory have been the trials made that already at several collieries in the district the steel ropes are about to be put down, whilst their general adoption throughout, not only South Yorkshire, but in most other colliery districts, will doubtless be accomplished at no distant period, as the more closely the system is examined the more strongly will it commend itself to the notice of those interested. Indeed, there appears to be no reason whatever why the entire use of horses, more particularly in large collieries, should not altogether cease in favour of a system combining greater power, and which at the same time is far more economical.

MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY,
Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

Mr. A. T. BECKS has specified a patent relating to the utilisation of Bessemer Steel Scrap. In treating Bessemer steel scrap, according to this invention, the said scrap is thrown into a lumping, or charcoal fire, and on the scrap is put charcoal or coke, or the small coke called breeze; the fire is urged by a blast, and as the scrap melts, or softens, and the fuel burns away, more scrap and fuel are added, until sufficient of the scrap has accumulated to form a ball; this is taken by the workmen to the forge-hammer, and is there hammered into a bloom, and afterwards rolled into a bar, or applied to any other required purpose. The metal as produced may be welded in the same way as ordinary wrought-iron. The yield is increased, and the quality of the metal improved, by the use of a little chalk, or lime, mixed with the fuel or scrap.

Mr. J. ANDERSON, of New-buildings, Londonderry, has obtained a patent for improvements in obtaining Chlorine, Sodium, Potassium, Phosphorus, and their Compounds. The chief objects of this invention are—1. The treating of chlorine by passing a heated mixture of air and steam, along with volatilised chloride of sodium, or of potassium, through minerals containing silica and alumina.—2. The obtaining of sodium and potassium by treating silicates and aluminates obtained with carbon and heated carbonic oxide, and the obtaining of the cyanides of the same alkaline metals by using heated nitrogen instead of the carbonic oxide, or part of it.—3. The obtaining of phosphides by acting on phosphate of lime and silicates, or aluminates of sodium or potassium, with carbon and carbonic oxide, or air deprived of active oxygen at a high temperature.—4. The obtaining of phosphorus by acting on phosphate of lime with carbon and carbonic acid at a high temperature, in the presence of silica or alumina, or minerals containing these earths.

MINES ASSESSMENT BILL

In consequence of the views to which expression was given by the SOLICITOR-GENERAL on the second reading of this Bill, and of the character of the amendments which it has been understood Mr. PERCY WYNDHAM proposes to introduce in Committee of the whole House, the Mining Association organised a meeting of Members of Parliament interested in Mining Property, with a view to determining on the course now to be taken in the matter. The meeting took place yesterday (Friday), in one of the committee-rooms of the House of Commons. Mr. LANCASTER, the Chairman of the Association, was present, and explained fully the views of the Association with regard to future legislation. Mr LANCASTER said the body whom he represented had been prepared to accept the Bill as introduced in November last, that being substantially the measure recommended by the Select Committee of the House of Commons, but they entertained strong objections to the amendments now proposed to be introduced by Mr. PERCY WYNDHAM, and especially to the provision which he sought to substitute for the clause known as the Corpus Clause. A good deal of discussion took place, but the general impression being that, looking at the state of public business, there was no prospect of the Bill passing this session, no formal resolutions were proposed, and the meeting separated, with a general understanding that the better course would be for the different classes of mine owners to endeavour before the assembling of another Parliament to come to a distinct understanding among themselves upon the questions connected with Rating. At the same time it will be necessary that the Bill of Mr. WYNDHAM should be carefully watched, as sometimes measures have a curious knack of slipping through a stage in times of excitement without being observed. The Bill stands for Committee on Wednesday next, May 20.

EXPORTS OF RAILWAY IRON.—The total exports of railway iron from the United Kingdom in March amounted to 45,174 tons, as compared with 43,575 tons in March, 1867, and 35,772 tons in March, 1866; and for the three months ending March 31 this year to 120,027 tons, against 89,901 tons in the corresponding period of 1867, and 89,130 tons in the corresponding period of 1866. The great consumer of our railway iron continues to be the United States, to which we sent 56,271 tons to March 31 this year, against 43,216 tons to the corresponding date of 1867, and 12,113 tons to the corresponding date of 1866. The exports have also greatly increased to British India, to which 27,053 tons were sent to March 31 this year, against 22,688 tons to the corresponding date of 1867, and 15,482 tons to the corresponding date of 1866. The value of the railway iron exported in March was 343,867*l.*, against 366,670*l.* in March, 1867, and 296,178*l.* in March, 1866; and in the three months ending March 31 this year 929,684*l.*, against 760,867*l.* to the corresponding date of 1867, and 721,658*l.* to the corresponding date of 1866.

THE EXPORT COAL TRADE.—The exports of coal from the United Kingdom attained a considerable importance during March, having amounted in that month to 813,565 tons, as compared with 704,236 tons in March, 1867, and 863,140 tons in March, 1866. In the three months ending March 31 this year the aggregate exports of coal from the United Kingdom were 2,070,962 tons, as compared with 1,887,195 tons in the corresponding quarter of 1867, and 1,985,798 tons in the corresponding quarter of 1866. The exports of English coal to France in the first three months of this year were 470,494 tons, against 484,532 tons in 1867, and 435,398 tons in 1866 (corresponding periods). The exports appear to have increased this year as compared with 1867 to almost every quarter except Russia, France, Spain, and Italy. The value of the coal exported in March was 395,079*l.*, as compared with 369,597*l.* in March, 1867, and 436,565*l.* in March, 1866; and for the three months ending March 31 this year 1,050,541*l.*, against 995,068*l.* in 1867, and 1,022,402*l.* in 1866 (corresponding periods). In these latter totals France figured for 216,012*l.* to March 31 this year, against 229,555*l.* in 1867, and 204,928*l.* in 1866.

GOLD IN NATURE.—The question of the existence of gold in Nature in other than the metallic state is one upon which various and very conflicting opinions have been expressed, yet up to this time the evidence on both sides has been of the most unsatisfactory character. The subject has been very fully treated of by Prof. A. L. FLEURY, of New York, in a paper read before the Polytechnic Association of the Academy of Arts and Sciences in New York; he observes that we do in our laboratories, metallurgic, and manufacturing establishments nothing else but attempt to imitate Nature, we have succeeded in preparing artificially a vast number of chemical combinations of gold with other elements, but still persist in denying to Nature the same privilege. We need only look and search for truths in the great book of Nature and we will find them; our test-books should be our guides, but not our infallible precepts. Prof. Fleury considers that nearly all quartz in Nature owes its existence to the decomposition of sulphide of silicium by water, and points out his reasons for doing so; and he further states that experiments which he has made has led him to believe that gold exists in Nature in two distinct allotropic conditions—in a metallic, molecular, crystalline state, withstanding the action of oxydising agents under ordinary conditions, and in an amorphous, not metallic and oxydisable form. Plumbago and lampblack may illustrate this idea. The former, like metallic gold, is heavy, a good conductor of electricity, and has all the appearance of a metal; while the latter, the lampblack, is easily oxydised, is light, is a non-conductor of electricity, and is amorphous. That in sulphurets the gold is mostly present in both modifications, and may sometimes be found in a chemically combined state.

THE RAILWAY INTERCOMMUNICATION BETWEEN ENGLAND AND FRANCE.—The continually increasing intercourse between England and France renders the desirability of the greatest possible facilities for the transport of passengers and merchandise more than ever apparent—so that greater interest will probably be each year felt in the various projects brought forward for connecting the two coasts. Some two years since reference was made in the *Mining Journal* to the design of Mr. CH. BOUTET, C.E., for constructing a light, yet strong and commodious, bridge, capable of affording accommodation alike for railway trains, ordinary road vehicles, and foot-passengers, and his plans have now been so far matured as to have enabled him to lay before his Majesty the Emperor of the French, at an audience granted to him for the purpose, the preliminary designs for carrying out the undertaking. It is gratifying to learn that the Emperor was so completely satisfied with Mr. Boutet's replies to his questions that he requested Mr. Boutet to let him have a detailed report of his scheme, with

plans, estimates of cost, time required for execution of works, and calculated profits to shareholders, remarking—"I will study the project myself, and we will second you. Your project seems to me far more practicable than any I have ever seen, whether for tunnels or bridges." As Mr. Boutet has made ample experimental tests to satisfy himself of the strength and applicability of the materials which he proposes to employ, and as he thoroughly recognises the importance of so combining economy with efficiency as to make the project commercially remunerative, there are good grounds for anticipating that the undertaking will be carried out, forming another great historical landmark in the Emperor's reign.

FOREIGN MINING AND METALLURGY.

There is not much change to report this week in the Belgian iron or coal trades. It appears that the imports of coal into Belgium in the two months ending Feb. 29 this year were 47,670 tons, as compared with 58,199 tons to the corresponding date of 1867, and 15,550 tons to the corresponding date of 1866. The principal sources of import in the three periods were as follows:—

	1866.	1867.	1868.
United Kingdom.....Tons	4,361	19,414	21,442
Zollverein	197	23,742	7,305
Holland	30	6,653	7,489
France	10,902	8,359	11,434

The imports of iron ore and filings into Belgium—principally from the Zollverein and France—amounted to Feb. 28 this year to 34,151 tons, as compared with 36,827 tons to the corresponding date of 1867, and 46,135 tons to the corresponding date of 1866. The imports of pig and old iron into Belgium to Feb. 29 this year were 4708 tons, against 6265 tons to the corresponding date of 1867, and 2126 tons to the corresponding date of 1866. In these totals the United Kingdom figured for 4058 tons, against 5096 tons and 2026 tons to the corresponding dates of 1867 and 1866 respectively. The imports into Belgium of rails, sheets, wire, and steel present little interest; in rails, however, the deliveries from the United Kingdom sustained a large part. The imports of machinery into Belgium appear to have been sensibly declining of late; they are divided principally between the United Kingdom and France. The exports of coal from Belgium in the first two months of this year amounted to 544,906 tons, as compared with 545,554 tons in the corresponding period of 1867, and 631,381 tons in the corresponding period of 1866. In these totals France figured for 527,572 tons, 530,160 tons, and 607,768 tons respectively. The machinery exported from Belgium in the first two months of this year weighed 561 tons, against 699 tons in the corre-ponding period of 1867, and 717 tons in the corresponding period of 1866. These exports were divided principally between Holland, France, and the Zollverein. The exports of rails from Belgium in the first two months of this year were 11,526 tons, against 12,893 tons to the corresponding date of 1867, and 4706 tons to the corresponding date of 1866. The principal directions taken by these exports were as follows:—

	1866.	1867.	1868.
Russia.....Tons	1,500	10,900	10,555
Holland	129	312	232
Italy	50	1,557	552

Sheets were exported to the extent of 1748 tons to Feb. 29 this year, as compared with 2136 tons to the corresponding date of 1867, and 27 5 tons to the corresponding date of 1866; and other descriptions of iron to the extent of 9645 tons this year, as compared with 7333 tons to the corresponding date of 1867, and 9808 tons to the corresponding date of 1866. Meetings are announced as follows:—West of Mons United Collieries Company, May 26, at Brussels; and the Stolberg and Westphalia Lead and Zinc Mines and Foundries Company, for May 27, at Aix-la-Chapelle.

The imports of coal into France in the first two months of this year amounted to 1,011,843 tons, as compared with 1,004,955 tons to the corresponding date of 1867, and 1,030,130 tons to the corresponding date of 1866. The imports from the United Kingdom, Belgium, and the Zollverein were as follows in the three periods:—

	1866.	1867.	1868.
United Kingdom ....Tons	244,422	289,057	277,593
Belgium	612,825	552,061	567,928
Zollverein	171,703	162,910	165,828

These are the French statistics; it will be seen that they slightly differ from the Belgian as regards the imports of Belgian coal, but the discrepancy is, after all, not very material. The imports of coke into France in the first two months of this year were 110,307 tons, as compared with 126,067 tons in the corresponding period of 1867, and 114,708 tons in the corresponding period of 1866. Meetings are announced as follows:—Moselle Colliery Company, May 16, at Paris; Franche-Comté Blast Furnaces, Foundries, and Forges Company, May 16, at Besançon; Villebœuf Mines Company, May 25, at Paris; Graissessac United Mines Company, May 25, at Montpellier; and Malfidano Mines Company, May 30, at Paris.

At Havre there have been some considerable transactions in disposeable Chilian in bars, as well as disposeable as to be delivered. The disposeable has made 79*l.* 8s. to 79*l.* 12s., and the lots to be delivered 79*l.* 10s. to 80*l.* and 81*l.* per ton; one lot of 10 tons of refined ingots has made 81*l.* 4s. per ton. At Paris affairs in copper have regained great animation during the last few days, and there has been a fresh advance in quotations, speculation, which for some little time had abandoned the enterprise, having vigorously resumed operations. Chilian in bars is quoted 79*l.* 8s. to 80*l.*; ditto in ingots, 81*l.* to 82*l.*; Corocoro mineral, 80*l.*; and English tough cake, 83*l.* per ton. Prices have been firm, and well maintained at Marseilles—Toka making 80*l.*; Spanish, 78*l.*; refined Chilian and Peruvian, 84*l.*; rolled red copper for sheathing, 92*l.*; and yellow ditto, 82*l.* Copper has remained in favour, and has enjoyed a good demand on the principal German markets. Tin maintains a good position on the Dutch markets, upon which there have been some well-sustained transactions. About 4000 ingots of Banca have changed hands at 56 fls., on which terms there remained buyers; 330 ingots of Billiton have also changed hands at 54½ fls., and 700 ingots of Billiton under sail at 55 fls. The annexed table shows the deliveries and stock of Banca on the Dutch market during the first four months of the last five years:—

Month.	1864.	1865.	1866.	1867.	1868.
January.. Ingots	5,165	4,230	11,950	10,950	6,650
February	9,190	4,987	7,959	6,193	11,050
March	6,085	9,640	17,236	6,519	10,050
April	6,377	5,660	24,192	12,568	14,748
Total	26,817	24,517	61,337	36,230	42,498
Stock on schedules April 30	48,821	42,390	147,268	164,356	119,211

The unsold stock of the Society of Commerce April 30, 1868, was 59,006 ingots, against 35,918 ingots April 30, 1867; 66,165 ingots April 30, 1866; 161,754 ingots April 30, 1865; and 102,163 ingots April 30, 1864. The direction of the company for the working of the Isle of Billiton has just published a notice in which it informs the trade that it intends to hold public sales of Billiton tin at Batavia in the months of June, August, October, and December, 1868, and February and April, 1869; at each sale it will offer for public competition about 5000 piculs. The article has been in moderate demand at Paris, but has sustained its value pretty well upon that market; Banca has made 99*l.*; Straits, 98*l.*; and English, 97*l.* per ton. At Marseilles tin has been firm, and without change in price. Without provoking important transactions on the German markets, tin has enjoyed, nevertheless, a regular consumptive demand. There are no important changes to notice in lead; with the exception of some purchases to meet current wants, but little business has been done. Zinc has been quiet, and prices have remained almost without variation at Paris; rough Silesian has made 20*l.* 18s. and other good marks 20*l.* 16s. to 20*l.* 18s. per ton. Transactions in zinc have been a little more active at Hamburg: at Breslau the demand has been moderate.

The establishment of the West of Mons United Collieries Company has just been authorised, and the statutes have been approved. The office is established at Boussu, and the object of the new company is declared to be the total or partial acquisition and working of collieries in Belgium, the fabrication of coke and other products derived from coal, and all operations relative to the working, transport, or trading in coal and its derivatives. The company's social fund is represented by 20,000 shares, without designation of capital or value. The company is authorised to issue obligations, but only to the extent of one obligation, calculated at the rate of redemption (20*l.*) for every two shares paid up. The Belgian General Company and MM. Liedts, Malou, and Barbanson transfer to the new company all the property of the Belle Vue, Baisieux, Dour, and Thulin Collieries Company; and M. Charles Letoret, proprietor at Mons, transfers forty-one fiftieths of the Grand-Hainin Colliery. The Belgian General Company, the Company of Capitalists United with a Mutually Industrial Object, M. de Baillet, Madame Dragman, MM. Doffegnies, Letoret, Stoclet, Catoir, and Landenois transfer all the property of the Longterne Trichères Collieries and Blast Furnaces Company. In consideration of their first transference, the Belgian General Company and M. Charles Letoret will receive 7000 shares in the new company, which they will divide according to their respective rights. In consideration of their second transference, the Belgian General Company and its co-associates will receive 1000 shares in the new company, which they will divide according to their respective rights.

The Southern of France Railway Company received on its lines, in 1867, six new locomotives, with six wheels coupled. The extension of the network, and the increase of traffic, render it necessary to further increase the plant, and the directors have ordered 10 locomotives, with eight wheels coupled, and 20 locomotives, with six wheels coupled. It is proposed, before the close of the year, to order 10 locomotives more. The stock will then be increased to 347 altogether. The Vulkan, a Prussian company at Stettin—which directs its operations, we believe, to a great extent to the construction of iron vessels—will divide at the rate of 6¼ per cent. per annum for 1867.

THE COPPER MINES OF NEWFOUNDLAND.—In his annual report to the Colonial Office, the Governor of Newfoundland says:—"In the past year the exportation of copper ore of a very superior quality was commenced, and at this time more than 2000 tons have been shipped. On my recent visit to Labrador and parts of the north-east coast of Newfoundland, I stopped at Tilt Cove, in Notre Dame Bay, for the purpose of seeing a mine, which is now in most successful operation, and which I trust is only the first of many which will soon be worked with profit to the proprietors and great advantage to the population, in affording new employment, which is often so sorely needed in the winter season. I was much interested in what I witnessed. The quality of ore is said to be equal to the best known from any other place. The fine kinds are worth as much as 20*l.* per ton, and the average value of the sales of shipments to England is equal to about 10*l.* per ton. Before the end of this year it is expected that a quantity worth from 80,000*l.* to 100,000*l.* will be shipped, and the ore now being extracted is even better than that first obtained One hundred and seventy men and boys are on the time list, and about 500 people altogether now reside at the settlement, which was not in existence three years ago. Some of the men make as much as 17*l.* per month, the average being from 10*l.* to 12*l.* Seventeen of the men employed, including the captain of the mine, are Cornish miners, but the remainder are Newfoundlanders. I spoke to several, and found them well pleased with their position and circumstances, which are, indeed, greatly preferable to those in which they had frequently been placed in seasons when the fishery had been unsuccessful, and their subsistence depended wholly on its result. If, as I believe will be the case in a very short time, many other mines equally productive should be worked, it will scarcely be possible to over value the beneficial effect of this new industry upon the circumstances of the labouring population."

REPORT FROM SCOTLAND.

MAY 13.—There has been a considerable business done since last week in Pig-Iron warrants, caused by a slightly speculative business to raise prices, but without imparting any permanent increase to quotations. On Monday several thousand tons warrants changed hands at 52s. 3d. to 52s. 4d. cash, but yesterday the market was easier, though a large business was done at 52s. 3d. to 52s. 2d. cash, with only a few lots over at the highest figure. To-day the market was steady, and about 7000 tons were done at 52s. 3d. cash, and 52s. 4½d. a month; closing sellers 52s. 4d., buyers 52s. 3d. cash. No. 1, g.m.b., 52s. 9d.; No. 3, 50s. 9d.; No. 1 Coltness, 57s.; Gartsherrie, 56s.; Langloan, 55s.; Glengarnock (at Ardrossan), 54s. The shipments for the week just ended include fair foreign exports, and the total, foreign and coastwise, reached 11,210 tons, against the slightly increased sum of 12,200 tons in the corresponding week of last year. Finished Iron is not by any means improving in price, makers working sometimes with only work for 24 hours, and are kept working from hand to mouth in faith. There has been no stoppage, however, of any of the works as yet, but were it not for the ship iron contracts business in malleable iron would be low indeed. Makers affect to be injured if you say they are working under quotations, but before you get to the foot of the street you find buyers who have just concluded a small purchase from 2s. 6d. to 5s. a ton under the nominal price, so that, practically, prices are lower, so we quote:—First common bar, 7*l.*—in some instances 6*l.* 17s. 6d.; second ditto, 6*l.* 15s. to 6*l.* 10s. Other kinds at the same rate of reduction. Ironfounders are pretty well off for work, but brassfounders complain of want of orders, though copper workers are well employed. An iron-foundry and two tenements of dwelling-houses at Coatbridge were disposed of by public sale, at the upset price (4500*l.*), there being no offers beyond that sum.

Coals for foreign ports are now very slack, and our shipments thither do not equal our home consumption even at this dull season of the year. Prices are unchanged either way. The shipments, foreign and constwise, for the week now closed amounted to 25,035 tons, against the larger amount of 25,795 tons the same week last year. The colliers are not so able to get work now as they were a few weeks ago, and a large coalmaster informed us to-day that were it not for their workmen's sakes they would shut up the half of their pits, and only keep the other half going, as they were now experiencing a sluggishness in demand unequalled for many years. In the midst of this unparalleled state of things we have strikes among the colliers, and men insane enough to encourage them in this course. A great delegate meeting has also been summoned for to-morrow, and Mr. McDonald appeals to the colliers to be present in these terms:—"I am of opinion that there is not a man among you but feels that something should be done to try to change the present current of events in regard to wages, or to fully know when the misery is really going to end. Come one, come all, in your tens of thousands, to the meeting on the 14th, and let the shout be that of one man, that the present poverty must soon come to an end. You are asked to make a levy of 6d. per man on that day, and to form an executive that will conduct your affairs. If the levy be forthcoming, your executive, if appointed, will be able at once to spread the flame of agitation to the remotest corners of the land. Our friends everywhere should send delegates to the meeting. Unless the men of Ayrshire come more closely together their fate will be worse. Let that whole county be represented at the meeting, as well as all the other counties of Scotland. The universal shout will make every stronghold of oppression totter to its base, and then fall.—A. McDONALD."

They are to try and do "*something*" when they meet, to "change the present current of events in regard to wages." This is lauda ile enough *per se*, but when it is known that they really can "do nothing" in the present state of trade and commerce, would it not be the greatest mercy and humanity to allow the men to get as much work as they can under the circumstances? But, no; they must meet, have an idle day, and "try and do something!" They may as well try to fill a sieve with water. Two new pits are about to be sunk at Govan Colliery.

Our shipbuilders are active, and are turning out some fine vessels. Mr. Marshall, of London, has had an iron sailing vessel added to his fleet this week, called the Buckinghamshire, of 1450 tons; the Newcastle Steam Shipping Company have had a screw steamer added to their list, named the Prince, of 550 tons, and a barque, called the Lizzie Iredale, of 700 tons, for the American west coast and general trade.

LARGE BOILER.—Mr. Wilson, of Lily Bank Boiler Works, Glasgow, sent a large and most substantially constructed boiler to the sugar refinery of Messrs. Neill, Dempster, and Neill, now in the course of erection at Dumfrochar Road. It was conveyed from Glasgow by rail to the new goods station opposite the refinery, whence it was successfully taken to the sugar-house by Mr. Wilson's men, without the aid of horses—a work requiring skill and care. This is the first use that has been made of the new goods station, which is still unfinished. This boiler, we believe, will be about the largest steam-boiler at work in Greenock. Its style of finish, like all the others sent from Lily Bank Works, speaks for itself as highly creditable to Mr. Wilson's establishment.—*Greenock Advertiser.*

REPORT FROM NORTHUMBERLAND AND DURHAM.

MAY 14.—There is no particular change to notice in connection with the Coal and Coke Trades, the demand still being inactive for most descriptions. The coal trade in Northumberland continues extremely dull; indeed, the steam coal trade has not been in such a stagnant state for a long period, and the men are far from being fully employed. The output of steam coal in this extraordinary district will be enormous when fully pushed to the extent of its capabilities, as most of the new winnings at Cambois, North Seaton, &c., are getting developed, and are capable of turning out large quantities. The new winning at Hertford is also considerably advanced; the erections are, indeed, almost completed. A large pumping engine-house, and also a winding engine-house and other erections, have been put up, and they are of a most substantial and imposing character. The quantity of coal raised here is expected to be very large, and the quality is not surpassed by any in the district. The Iron Trade remains very quiet, and the quotations have not changed. No. 1, 47s.; No. 3, 43s.; and No. 4, 42s. Manufactured iron remains as before, and continued slackness in the foundries is reported. To Scotland large quantities of iron are now being regularly shipped, and sent off by rail; but the Scotch makers are becoming rather sore at the extensive importation of Cleveland iron now taking place; hence there is a determination to bring down prices more nearly to the Cleveland level, in order, if possible, to cut that district out of competition. There is, however, yet a margin of 3s. to 4s. per ton in favour of Middlesborough, after carriage is paid, and this will have to be sacrificed before Scotch makers will be able to regain a position in their own market. The threatened competition is regarded with a considerable amount of interest by the trade here. France is now taking large quantities of North Country pig-iron. To Holland and Austria the shipments are also heavy. The Baltic trade being now reopened also affects the continental demand. The recently-published accounts of the Ironmasters' Association show that the make of pig-iron for April was 88,355 tons; the shipments foreign, 10,267 tons; the shipments coastwise, 18,050 tons. If the total production of the district is taken into account, the secretary to the trade estimates that the make for April was 102,000 tons, or at the rate of above one and a quarter million tons per annum. A list of the furnaces in the district shows that there are 87 blowing, 55 out: total, 142. Most of those stated as out of blast are old ones, requiring alterations to be adapted to the present system of trade: so that most of the furnaces in Cleveland are in blast. The correspondent of the Birmingham *Daily Post* gives the following as the current prices for North of England pig and finished iron:—

Common bars	£6	5	0	to £6	10	0
Best bars	7	5	0	to 7	10	0
Best best bars	8	5	0	to 8	10	0
Ship plates	7	15	0	to 8	0	0
Boiler plates	8	15	0	to 9	0	0
Angle iron	6	12	6	to 6	17	6
Rails	6	5	0	to 6	10	0
Bridge rails for collieries	6	10	0	to 6	15	0
Puddled bars	4	2	6	to 4	5	0

On wagons at works—four months' bill, or cash less 2½ per cent.

Cast-iron girders, plain	£5	10	0	Cast-iron pipes, 5 to 8	£4	17	6
,, chairs	3	2	6	,, ,, 10 to 15	4	15	0
,, pipes, 1½ to 2½	5	17	6	,, ,, 18 to 24	4	12	0
,, ,, 3 to 4	5	0	0	Wrought-iron girders, plain £13 to £14			

On wagons at works—Terms, nett cash.

Pig-iron, No. 1	£2	7	7	Pig-iron, No. 4 Forge	£2	2	0
,, 2	2	5	0	,, Mottled	2	1	6
,, 3	2	3	0	,, White	2	1	0
,, 4 Foundry	2	2	0	,, Refined iron	3	0	0

Terms—Nett cash at furnaces, or 1s. per ton extra for four months' bill.
Warrants—Sellers, 44s. 6d.; buyers, 44s.

The deposit of iron ore in Algeria, specimens of which were shown in Middlesborough on Tuesday week, appears to be a most remarkable one. Among the reports received at the Foreign Office from Her Majesty's Consuls in 1868, there is one from Algeria, by Lieut.-Colonel Playfair, from which we make the following extract:—

"The mineral wealth of this country appears inexhaustible. I visited the iron mine of Mokta-el-Hadid, near Bône. Far from realising any preconceived idea of a mine, it rather recalled to my recollection some of the tales in the "Thousand-and-One Nights." It is simply a mountain of iron. In some places the mineral crops up above the surface of the ground, and is worked in immense crater-like cutting to a depth of 32 metres; in other places it occurs in sloping veins, always of great thickness, resting on a bed of mica schist, and covered with a thin layer of indurated clay, mixed with nodules of iron ore. The amount of ore sent annually to France is about 200,000 tons. It yields 65 per cent. of metallic iron, and can be shipped at Bône for 12 frs. per ton. At present it has to be taken off to the ships by means of barges and steam-tugs, and even thus 800 tons per day can be shipped; but the company (Société Général Algérienne) are engaged in the construction of harbour works which will enable vessels to be laden directly from their pier."

It would appear from this description that this remarkable deposit resembles in many respects the large deposits of hematite iron in Cumberland, and also the deposit of magnetic iron at Rosedale, in Cleveland. The yield of iron, too, appears to be quite similar, if not identical—65 per cent.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

MAY 14.—No improvement can be reported in the demand for iron. In spite of the strike, there is only a slight accumulation of orders. It is stated that there is a rather better demand on railway account at the great works at Wednesbury, but it is far from being sufficient to keep them in full employment. As a striking proof of the competition to which South Staffordshire is exposed, it was stated on 'Change, at Wolverhampton, yesterday, that a thousand plates were required at Wednesbury. The order was taken by a Wolverhampton merchant, who supplied the plates from Middlesborough at 5s. per ton less than they could be got from the works on the spot. Adding his commission and the carriage, the difference must be fully 1*l.* per ton; and remembering how far South Staffordshire is from the seaboard, the severity of the competition is manifest.

The strike against the reduction of wages is not yet over. More than half the puddlers are out, perhaps nearly three-fourths, but they seem to be going in here and there. It is stated that a distribution of 8s. per man has been made from the Union funds. If this be all that has been paid in four weeks, the men must be in a sad way. Many are now serving with the militia, but their period of training will be up next week. Notice has been given to the coal miners on Cannock Chase of a reduction of 6d. per day, which is only carrying out a reduction made in the Wolverhampton district some time ago. It is double the amount, but it is stated that the wages of miners on the Chase were previously higher, and will still be above those of the men in the old thin coal district, a larger rate of wages having at first been necessary to tempt men to remove to a newly opened part of the coal field.

On the whole, there is a degree of improvement in the Hardware Trades. The orders from the East Indies and from South America are rather larger. Manufacturers are not busy, but there is not very much short time. A method of producing horse-shoe nails by means of a steam-hammer is described as perfectly successful. The face of the hammer contains two dies, one corresponding to the side and the other to the edge of the nail, and there are similar dies in the anvil, on which the hammer works. A holder receives the bar of iron from which the nails have to be made, and shifts it from one die to the other after each blow, so the face and the edge are struck alternately. This result has been the object of various contrivances.

A painful incident happened at Tividale on Tuesday. There was a meeting of the ironworkers on strike, and they were addressed and encouraged to remain out by a tin-plate worker, named Thomas Griffiths, who, on sitting down, leaned his head on the table and expired. He had been for some time in bad health.

A company, composed principally of Lancashire gentlemen, have purchased the Birchills Estate, near Walsall, formerly belonging to Mr. John Jones, with a view to let or sell it in lots, and it is expected that the collieries will shortly be re-opened.

At the Hanley Police Court, on Monday, John Cope, a miner employed at the Norton Colliery, was fined 2*l.*, with 12s. 6d. costs, for smoking in a part of the mine were lamps where exclusively used. The sentence in default of payment was three months' imprisonment.

An inquest was held on Saturday, at Bradley, near Bilston, as to the death of John Beddows, a miner employed by Messrs. John Yardley and Co. On the previous Monday the deceased and another were going down in a skip, which caught a piece of wood projecting from a shaft, was turned over, and deceased fell out and received injuries which caused his death. The other man grasped the chain and was saved. A verdict of "Accidental Death" was returned.

A large firm in this district (says the Dudley Correspondent of the *Wolverhampton Chronicle*) has given the thick coal colliers notice of a reduction of 1s. 3d. a day, bringing them down to the same level as the thin coal workers, whose rate of wages is at present 3s. 3d. per day. This reduction applies to those colliers only who work on the "long wall" system, or the raising of the thick coal at twice, beginning, say on the top of the "stone coal," working upwards, getting the "veins and fine coal," brazils, tow coal and heath coal, white coal and roofs afterwards, the bottom coal—the "benches," "slipper and sawyer," "patchels and stone coal." Mr. Baker, the Government Inspector, and many practical mine agents, think this the best and safest way to get the 10-yard coal, whilst others consider that the "rib and pillar," or square system, is the most profitable to the owner, though admitted to be more dangerous. The "long wall" system does not produce so much large coal as the "rib and pillar" mode of working; hence, looking at the profit, the latter plan may be considered the best, and on account of the improvement in machinery and the careful supervision which is now exercised in reference to the safety of the men, the "rib and pillar" is the one most likely to be generally adopted. The "Mining Association" is giving this subject a careful consideration, and shortly some papers will be read by the advocates of both systems, leaving practical men to judge the best plan to adopt in getting the thick coal measures of these districts.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

MAY 14.—The Iron Trade of the district still continues in a languid state, although at some of the larger establishments a slight improvement has taken place. There has been a rather larger tonnage of coal sent from Clay Cross to London, the returns for the past month showing an increase of fully 2000 tons over March; still the trade to the metropolis is very far from good, there being a falling off for April, when contrasted with March, of no less than 29,783 tons on the entire tonnage carried by the various railways into London, whilst the last four months show a decrease of 123,501 tons, when compared with the same period of 1867. In the southern part of the county the men have got well settled down, and although, as in most other districts, short time is the rule, still the prospects of the trade are more encouraging than they have been. Several new pits are being opened out in various directions, and new coal fields are being worked out, more particularly on the route of the line now constructing from Sheffield to Chesterfield, which promises to be one of the most profitable extensions connected with the Midland system.

In several branches of the Sheffield trade there is considerable improvement, more particularly in merchant iron and railway material The large ironworks in the neighbourhood are also becoming more active, there being some good orders in hand for various qualities of manufactured iron. In castings the foundries are doing rather more, and the activity in the building trade is likely to considerably increase the demand for stove grates and house-fittings. The works at Milton and Elsecar are kept well going, there being a large business doing in rails, sheets, boiler-plates, &c. The demand for coal from the South Yorkshire district has not materially improved during the week, and complaints as to the slackness of orders are pretty general, most of the pits not more than four days a week. The tonnage being forwarded to London has not at all increased, nor is it likely to do so for some time. The great falling off in the consumption of coal in London is a pretty sure indication of the slackness of trade prevailing there, and it is to be feared that our colliery proprietors have a very bad season before them, and which does not appear likely to be mitigated by the Great Northern Company lowering its present rates. There is rather more doing in steam coal for Grimsby, but as yet the trade to Hull, considering the advanced period of the season, has not been anything like what it has hitherto been, and, as a result, freights are not easily obtained, although the rates are very low for carriage by water. To Lancashire there has not been so much doing during the week from the district, and the wagons sent from Wigan and other places are now being withdrawn, consequent on the men having resumed work. In several parts of Yorkshire sinking operations are being pushed forward, and several new and extensive coal fields are about to be opened out.

There has been no change in the state of things at the Oaks Col-

liery, and up to the time of writing no more bodies have been recovered. A good many coffins, however, have been got ready, in anticipation of some of the remains of the unfortunate men being met with. The workmen have found several very heavy falls of stuff as they have proceeded along, and which have considerably retarded their progress. Another disadvantage under which they labour is that the temperature in some places is as high as 90°.

REPORT FROM MONMOUTH AND SOUTH WALES.

MAY 14.—The hands at two or three of the leading works are now a little better employed than they have been of late, in consequence of the increasing exports to the United States, but, upon the whole, the usual quietude is evinced in every branch of the trade, and in no department of the manufacture has there been any material accession of engagements. Considering the great depression which has prevailed for so many months, there are signs of trade slowly advancing towards a more satisfactory position; and as confidence becomes re-established the improvement will, no doubt, become much more rapid. Though prices have not improved, in some instances there has been a tendency to increased firmness. Home buyers are adding slightly to their purchases, but there is still a want of that vitality which characterised the trade in former times. The Lancashire and Yorkshire Railway Company are advertising for tenders for 5000 to 10,000 tons of rails, but the home railway companies generally, although they have heavy requirements, are buying with considerable caution, and this they will no doubt continue to do for some few months to come, until they are in a stronger financial position. The demand from India has slightly fallen off, and latest advices are not so encouraging as they were, but it is to be hoped that more cheerful intelligence will shortly be received from that country. Large quantities of rails continue to be shipped to the United States, and there is a tolerably good demand from the British colonies. To the South American States the exports are limited, but there is a prospect of an increase taking place in the demand from that quarter. Some few Russian orders have come to hand, but not for such quantities as will warrant it being said that there is a large amount of business doing with that empire. As stated in last week's report, the Belgian iron-masters are more determined competitors this year than ever known, and the prices which they quote are not only cut extremely fine, but in some instances astonishingly low. The mode of payment is also a difficulty, which Belgian ironmasters seem better able to solve than British masters, who do not care about accepting payment in bonds and railway securities. From the continental markets there is an average enquiry, and there is every prospect of a steady trade being done during the summer months. Bars are moving off freely at from 5*l.* 10s. to 5*l.* 15s. Pigs of the best brands command a fair sale. There has been a falling off in the demand for Tin-Plates, and prices are a little easier than they were this day week. Stocks, however, are low, therefore there is a fair prospect of prices being strengthened.

Steam Coal proprietors are fairly placed for orders, chiefly for the East, French markets, and South American States, while to the Continent about an average quantity is being sent. As anticipated in last week's report, the close of the war in Abyssinia has already caused a reduction in freights to Aden and other coaling depôts belonging to the mail packet companies, but there will be no material decrease in the demand, as stocks are known to have been greatly reduced of late, and the mail packet companies have not sufficient to meet their own requirements for any lengthened period. The demand for the Baltic is not as yet for any large quantities, but it is generally believed trade with that quarter will increase. French houses continue large purchasers, Marseilles, Havre, Nantes, and Trieste being the principal ports to which shipments are made. For house qualities there is an increased demand, West of England and Irish houses preparing to lay in stock for the winter season. In connection with the strike in Monmouthshire, the position of affairs has assumed a very different aspect to that anticipated this day week. At Abercarne, where the colliers have been on strike about 15 weeks, even the most determined of the men have given way, and accepted the masters' terms, and in a few days operations will be going on as usual. At the South Wales Colliery the old hands have consented to accept the reduction, and it is understood that the colliers and bankwomen lately brought down from Bilston are to receive a certain sum of money and return to their old quarters. At Abertillery the turn-outs are willing to go in on the drop, but so serious a loss has been incurred by the proprietors through the intimidation practised that they have determined to engage an entirely new lot of colliers. A mass meeting of the house colliers took place at Blackwood, on Tuesday, and much uproar prevailed, but it was ultimately agreed to return to work on the reduction of 1d. per ton, a proposition, it is almost needless to say, the masters refused to accept. It is very probable that if the men had shown a conciliatory feeling at first the masters would have met them liberally, and the reduction would not have been so great as it now is.

The Clyne Wood Colliery, recently opened near Swansea, turns out most satisfactorily, and there is every prospect of the company receiving a good reward for their perseverance in winning the coal.

The arrivals at Swansea include—the Alma, from Motrel, with 200 tons of zinc ore, for H. Bath and Son; the Stranger, from Leghorn, with 323 tons of copper ore, for H. Bath and Son; the San Jose, from Coquimbo, with 260 tons of copper regulus, 200 tons of copper bars, 124 tons of copper ingots, and 64 tons of lead, in pigs, for H. Bath and Son; the Laura, from Carloforte, with 530 tons of zinc ore, for H. Bath and Son; the T. G. V. from St. Malo, with 180 tons of zinc ore, to order; the E. A. B., from Garrucha, with 140 tons of copper ore, for A. M. Bell; the Lorenzo Semprun, from Bilboa, with 312 tons of iron ore, and the James Cuckow, from Bilboa, with 236 tons of iron ore, for W. H. Tucker; the Sophie, from Redon, with 72 tons of iron ore, for W. Crawshay.

TRADE OF THE SOUTH WALES PORTS.—The following are the returns of the quantity of coal shipped at the South Wales Ports during the past month and the corresponding month of 1867:—

EXPORTS.	April, 1868.	April, 1867.
Cardiff	Tons 182,415	Tons 143,089
Swansea	62,973	45,278
Newport	28,880	22,962
Llanelly	18,310	12,806
SHIPMENTS COASTWISE.	April, 1868.	April, 1867.
Cardiff	Tons 82,162	Tons 73,202
Swansea	24,182	23,696
Newport	46,'59	23,282
Llanelly	20,182	15,729

Cardiff also exported 17,166 tons of Iron, of which New York took 8208 tons and Baltimore 3757 tons, and 8226 tons of patent fuel; Swansea 1987 tons of iron and 4683 tons of patent fuel; and Newport 14,566 tons of Iron, of which New York took 7885 tons, Dantzic 1523 tons, Annapolis 1097 tons, and Cronstadt 206 tons.

[In last week's Journal it was stated that a presentation had been made to Mr. Caull, the late *manager* of the Swansea Tin-Plate Works, on his leaving for a situation in the North of England. We are informed that Mr. Caull was "not the manager, but engaged as a *foreman assorter*."]

IMPROVEMENTS IN THE MANUFACTURE OF TIN PLATES.

As an improvement upon the ordinary mode of coating sheet-iron and copper by first dipping the sheets in acid, and then in the molten tin or alloy, Messrs. GRUNEBERG and GILBERT, of Spring Mills, New Jersey, propose a new system of coating by means of a bath of muriate of tin. They remark that the disadvantage of the old process is that a considerable portion of the surplus covering would harden before it had run off from the lower end of the sheets, so that only part of the said sheets would possess the proper thickness or surface. They find, however, that this inconvenience can be remedied, and that long or large sheets of metal can be uniformly coated or plated in a simple manner, so that an article of metal is produced which possesses all the advantages of pure tin, and at a much less expense. If the sheets of tin or alloy are spread or laid upon sheets of hard metal so as to entirely overlap them, and the two sheets be subjected to rolling under a heavy pressure, the friction thereby will heat the metals in passing through the rolls, and cause them to unite firmly and with a uniform surface, so as to produce a superior article of metal.

In carrying out their invention they roll down the sheets to a suitable thickness, and then make an alloy of either one-quarter tin, one-quarter copper, and one-half lead, more or less; or six parts tin, one antimony; or fifty parts tin, four antimony, one bismuth; or fourteen parts tin, one twenty-eighth part zinc or copper, or one-half of each of the latter ones; or pure tin, alloyed with as much of one of the above-named metals, or any other metal, which will give it more stiffness and durability than it has in its natural state; or they use pure tin itself. A block of the tin, or tin or other alloy, is now cast in a mould of suitable size, which block is then passed through highly-polished rollers, so as to be reduced to a proper thickness to answer the purpose of common plating. The thickness may vary from 1 to 35 per cent. of the original thickness of the block or sheet of hard metal selected. The strips thus produced are then severally spread or laid upon a smooth level table. One of the afore-mentioned blocks or sheets of hard metal is now laid upon one of the strips of tin or alloy, which strip is then lapped over the former, so as to entirely cover it. Care must be taken to rub it smoothly, in order to prevent the formation of air blisters or wrinkles. The compound sheet or block thus constituted is now passed between highly-polished rollers under heavy pressure, whereby the metals become quite hot in passing through, thus causing them to firmly unite and evenly in one solid sheet, having either the tin or alloy or other metal for the outer coating.

Sometimes they vary the above process by preparing a solution of one pound of muriate or nitrate of tin, and ten gallons of water, at a temperature of 980° Fahr. Into this bath they dip the desired sheet of hard metal for the space of 5 to 20 minutes, more or less, when the sheet will be found sufficiently covered with pure tin. It may then be polished or rubbed bright with soft cloth or leather. It will be found that steel or iron, coated with tin or alloy, can be used for cooking utensils, and for every article in which sheet tin is employed. The surface being entirely uniform, it cannot be affected by dampness, and thus serves to prevent rust. They claim that their process is also applicable to prevent oxidation or corrosion in zinc, and that they can produce very large sheets thereof, when by the process now employed it can only be produced in small pieces. For lining bath-tubs, water-cisterns, and the like, their zinc will be found invaluable. For photographic and lithographic purposes, they interpose between the sheets of covered or plated zinc suitable pieces of tissue or other paper, muslin, or any equivalent fabric, and then subject them to another pressure; or they pass the metal between rollers having a slightly roughened surface, so that the impression of the paper, fabric, or rollers will be imparted to the metal, and cause its surface to assume a certain roughness necessary to photographic, lithographic, printing, or any other ornamental purposes.

NEW WHITE METAL SHEATHING.

An improved composition, consisting apparently of lead, with a small percentage of tin, is at present being introduced by Messrs. MELL and Co., of Bartholemew-lane, E.C., as a substitute for yellow metal, and other materials usually employed. The metal has been designated Union Metal, but as the name of the patentee is not disclosed, that of Messrs. Mell and Co. not appearing in the list of applicants for patents, it is probable that there is less novelty in the composition of the sheathing than some have supposed. For some time past Mr. Joseph Betteley, of Goree Piazza, Liverpool, has been engaged on a somewhat similar, if not identical, alloy, and it is not unlikely that the white metal sheathing tested at the landing stage of Egremont was produced by a process at least corresponding with that of Mr. Betteley, by which he produces a cheap sheathing metal, composed of 100 parts lead, 1 to 5 parts tin, and 1 to 5 parts regulus of antimony; this he hardens by immersion in hot oil, and fastens to the ship by means of composite nails.

An interesting report upon the new metal has been made by Mr. David Forbes, F.R.S., in which he states that the trial of the metal fixed to the Egremont landing stage shows decided evidence that it is not liable to foul, and indicates that the action of the sea water upon this metal causes the formation of a somewhat greasy or slippery surface or coating, which tends to prevent the attachment of vegetation or barnacles, &c., on to the metal. The results of numerous experiments still in operation have, as far as they have gone, proved highly satisfactory, as showing not only that this metal possesses a decided superiority over zinc, but also that it may compete with copper or yellow metal sheathing in regard to durability, and that in some cases it may be even superior to these metals in resisting the corrosive action of some very foul waters in the tropics and other places. In the experiments which have been already made with sheets of known size for testing the value of the new metal in comparison with copper sheets the results were decidedly in favour of the former. Weighed sheets of precisely the same dimensions were placed in similar quantities of sea water, and left so to be acted upon for a considerable time, all the conditions being the same in both instances, it was found to be the case that during the time in which the pure coppper sheathing lost in weight from 52 to 57 grains per square foot of surface, the Union metal did not lose more than from 6 to 19 grs. per square foot at the utmost, showing that it was the more durable, or resisted the action of the salt water so much better, than copper sheathing.

The great recommendation of the new metal appears to be that in wear it becomes coated with a protective tarnish, instead of scaling. Mr. Forbes, referring to this fact, says that on some of the African stations, in the London Docks, and in other places, it is well known that copper and yellow metal sheathing perishes, or is eaten away with great rapidity, and chemical examination has shown that this is due to the presence of sulphuretted hydrogen in the sea water. Experiments made with such waters, artificially prepared, proved most satisfactorily that the Union Metal sheathing resisted such corrosive action far better than pure copper or yellow metal. The Union Metal, when placed in these waters, became quickly tarnished, and of a light brown colour, but afterwards seemed not to be further changed, and suffered but very little diminution in weight. The copper, on the contrary, appeared to be immediately attacked by the sulphuretted hydrogen, causing it to be covered with a dark-brown crust, which soon detached itself as brown flakes of sulphide of copper, thus exposing a fresh surface to action, and causing a rapid and considerable loss of copper. It was quite evident, therefore, that the Union Metal would stand much better than copper under such circumstances, which are not at all exceptional.

The softness and pliability of the metal enables it to accommodate itself to the ship's side with the greatest facility, requiring little or no lining. Mr. Forbes states that if the ship's outer skin be sound, well caulked, and payed, it can be used without either felt or paper. Its tenacity is very great, and it does not become more brittle, as copper and yellow metal frequently do, by long exposure to sea water. If abraded or raised at the corner of a sheet by a blow or otherwise it will either double over, or, if torn, retain its hold at the next nail, whereas, under such circumstances, copper or yellow metal usually rip up along the entire length of the sheet. As to the durability of the white metal sheathing, and its applicability to the purpose intended, these tests are considered as conclusive; whilst with regard to its economy, it will suffice to state that the price is one-half that of yellow metal, and that the old is taken back in exchange at nearly one-half the price of the new.

"MINARGENT"—THE NEW SUBSTITUTE FOR SILVER.—The minargent, which is the invention of Messrs. SCHMITTE and LEVALLOIS, of Paris, and which may be compared to silver, possesses nine-tenths of its whiteness, malleability, ductility, tenacity, sonorousness, and density, while it has a superior metallic lustre, wears better, is less liable to be acted on by the emanations of sulphuretted hydrogen, and is less fusible than silver. Minargent may be used for all purposes to which silver or other white metals or alloys are applicable. It is composed of 1000 parts of pure copper, 700 parts of pure nickel, 50 parts of pure tungsten, 10 parts of pure aluminium. The inventors do not, however, limit themselves to the exact proportions given. The chief features of the minargent consist in the introduction in the alloy of pure tungsten and pure aluminium, and also the considerable proportion of nickel which they have succeeded in alloying with the aluminium, notwithstanding its known want of affinity therewith. Thus they may use not only the proportions given above, but vary each of them more or less as may be desirable. They first melt together the three first elements, care being taken to cover them with small lumps of charcoal. They are then run off in a granulated form, and again melted, adding aluminium as above mentioned, and about 1½ per cent. of a flux composed of one part borax and one part fluoride of calcium: these proportions of flux are reduced as the fusion proceeds. The metal is formed into ingots, and moulded in sand in the ordinary way. The ingot and other moulds should be greased with some fatty matter, such as suet or resin. The forging, rolling, wire-drawing, and annealing of the metal is also effected in the ordinary manner, care being taken not to employ sulphurous fuel, while for "cleaning" the metal dilute sulphuric acid is used, and a dead surface is obtained by the aid of nitric acid of commerce.

LIME LIGHT FOR STREET LAMPS.—At the Liverpool Polytechnic Society meeting, Mr. Arnott called attention to the fact that one or two streets in Edinburgh had been illuminated by means of the lime light. As to the superior quality of this light there could be no doubt, the only question, in his opinion, was the expense. How the objection of cost had been overcome at Edinburgh he could not say.—Mr. Abraham considered the expense was not the only consideration, he much doubted whether the lime light would be adapted to the illumination of streets.—The President, Mr. J. T. King, said that the subject was one of great interest. When they saw that such an important city as Edinburgh had been illuminated with the lime light, it was desirable to ascertain what modification of mechanism had been adopted, and the relative cost, but in the illumination of streets the intensity of the light and its equal distribution must be considered.

MORE CALIFORNIAN MINING MACHINERY FOR CENTRAL AMERICA.—Some three or four months since we noticed the fact that the English mining company, known as the Javali Gold and Silver Mining Company, of the State of Grenada, in the Republic of Nicaragua, had ordered a 10-stamp mill from the Union Foundry in this city, preferring to obtain their machinery here, rather than from the English foundries, for the reason that our mechanics are better posted as to the character of machinery needed than English mechanics. We have now to state that the same company has ordered another mill of the same capacity from the same foundry. Wheeler pans with a Belcher settler and Blake's crusher will accompany the stamps. The whole will be driven by an 18-in. Tyler turbine wheel, with 62-ft. fall. The order for this mill is unusually full and complete, calling for a general fitting out of everything necessary about a quartz mill—such as cars for tramways, wheelbarrows, carts, pans, shovels, picks, retorts, quicksilver, and an assay furnace and general assortment of chemicals. Even the literary portion of an outfit was not forgotten; as copies of Kustel's book, J. Arthur Phillips' late work, Randall's Quartz Operator's Hand-book, a file of the *Mining and Scientific Press*, &c., are included in the order. The Javali Company is bound that there shall be no failure at their mines from lack of the necessary appliances and guides for properly opening and working the same. May their success be equal to their liberality and enterprise.—*Mining and Scientific Press, San Francisco, April 4.*

HOW TO MAKE RAILWAYS PROFITABLE.

The question how to make railways profitable is one in which so large a number of persons are pecuniarily as well as otherwise interested, that a well-digested scheme for solving the problem cannot fail to prove very generally acceptable. To supply the outline of such a scheme has evidently been the object of the author of the work—"Observations and Suggestions on the Railways of the United Kingdom, showing how they may be immediately rendered more Serviceable and Beneficial to the Public generally than they now are, and much more Remunerative to their Proprietors," by "F. B."—just issued by Messrs. Causton and Sons, of Eastcheap. The author observes that under present arrangements railways seem to be drifting into difficulties or insolvency; whilst the chief objects to be desired and effected by means of fares, rates, and charges should clearly be to derive therefrom the best returns for the shareholders that can equitably, and with due regard to the interests and convenience of the public and of all concerned, be procured; and to render railway conveyance and transit desirable, safe, convenient, and necessary for all classes of the community. In considering such matters, it should always be borne in mind that the cost of the railways has no relation whatsoever to the fares and charges that may be made thereon.

It is urged that the directors and managers of railways who may henceforth continue to charge high fares and rates must be mentally blind, defective in intelligence, or incapable of perceiving and understanding the plain facts—that five sixpences are more than one shilling; that the cost of sending short and nearly empty trains on railways is very nearly equivalent to that incurred by sending longer and better filled trains; that only large numbers of persons can properly support and maintain railways; that with high fares and charges comparatively few persons will travel or send goods, &c., by railways, and those only in cases of necessity, and as seldom as they well can do; that high rates and charges for the conveyance of passengers, goods, produce, &c., must operate to minimise the traffic upon railways, while enhancing the cost thereof to the consumers generally; and that high fares and charges must materially limit and restrict the use of railways, to the detriment of the public and of the proprietors thereof. The author points out that the penny postage, penny steamboats, penny newspapers, cheap bread, tea, sugar, coffee, and many other articles, furnish prominent examples that cheapness increaseth the use of nearly everything useful, that dearness limits and restricts the use of anything, and that railway conveyance, therefore, like any other commodity, will always be used in accordance with its costs and charges. Many railways, he continues, are now drifting towards difficulties or insolvency, and it is only by a timely adoption of low fares and charges that their condition can be rendered sound and prosperous. Let but one railway adopt very low fares and charges, and improved regulations and arrangements, and it will speedily become so eminently prosperous that every railway in the kingdom will hasten to follow its example, and the shareholders of the railways generally will then regard the writer of these remarks as their greatest benefactor, and as one who raised them from "the slough of despond" to a condition of affluence and prosperity. All great and good things are plain and simple, devoid of mystery or complication.

There is, doubtless, a considerable amount of truth in the remark that the present rates and charges for passenger traffic and for the transmission of goods, produce, &c., by railways are enormously high, and, therefore, procure only the minimum of traffic, while the cost of conducting the same is nearly equal to the expenditure necessary for conducting the maximum of traffic. The charges for conveying goods, produce, &c., by railways are now nearly equal for distances of 200 or 300 miles to the charges now made for conveying goods, produce, &c., to Australia or China; while for shorter distances still more exorbitant charges are made for the conveyance by railways of goods, produce, &c. Low fares and charges must operate to produce the maximum or largest attainable returns, for nearly all persons will avail continually of railway convenience and transit when they find it greatly to their interest and convenience to do so. All large reductions in the prices of articles of utility occasion a vastly increased use and consumption thereof. It is of immense importance to the inhabitants of London and the provinces that very low rates should be charged for the conveyance by railways of all articles of utility. Such charges would enormously augment the use and consumption of those articles, and in consequence would proportionately benefit the producers, while creating much auxiliary and additional goods and passenger traffic for railways. Nearly every article of produce or manufacture would be favourably affected, immensely increased extension and development of the produce and traffic of the United Kingdom would speedily ensue, and the whole community would derive much advantage therefrom.

In consequence of the high fares and rates of railway conveyance which now prevail, the most numerous classes of the community are unable or unwilling to avail, frequently, of railway conveyances—as mechanics, operatives, agricultural and other labourers, women and children. Such persons cannot afford to pay high charges for personal conveyance, and therefore now travel but seldom, or not at all, by railways. Reduce passenger fares of second class to a rate of one penny for every five miles, and of third class to one halfpenny for every five miles, and millions will continually use railway conveyance who now but seldom do so. The cost of conveying short and nearly empty trains on railways nearly equals the cost of conveying longer and better filled trains thereupon. He maintains that when persons become used to railway conveyance they will continually avail themselves thereof in order to save their time, money, and exertions. With low fares they will go short journeys—for shoping, visits, business, &c. The mid-day and afternoon trains, in place of being as now, short, and nearly devoid of passengers, will then be longer, and well filled with mechanics, labourers, woman, children, and others, and the aggregate amount of such new fares and traffic will vastly exceed the receipts now obtained by means of high fares, and far more than compensate for any necessary reductions.

Goods and parcels rates should also be largely reduced. Parcels under 14 lbs. weight should be conveyed any distance for 1d. each, and proportionally for greater weights; and delivered as addressed, as far as may be practicable. The results of such charges would be similar to those which have been obtained by the penny postage. The present goods and parcels rates are absurdly high, and in some cases almost prohibitory. Fares, and rates, and charges should not be higher upon any one portion of a railway than upon any other portion thereof; but much inequality now prevails. Every care and precaution should be used for the prevention of accidents. The money which has to be paid and disbursed as compensation, &c., in all cases of accidents, would, if judiciously employed, far more than suffice to prevent accidents. Regard for the railway funds should induce the directors to cause such improvements to be effected, even if they may not desire to protect passengers from danger and suffering. Return tickets by all ordinary trains should be available for any time or for any person. Why should not return tickets be transferable? Why should the purchaser of a return ticket be restricted as to the day or date of his return? Why should he not be permitted to give, or part with, his return ticket to any person? He has paid for it, and for a certain amount of railway conveyance by ordinary trains, and should clearly be entitled to take such conveyance at his convenience, or to part with it to some other person. All unnecessary restrictions or limitations of any kind should be immediately abolished.

That the adoption of such a system as "F. B." proposes would materially increase the profits of railway proprietors can scarcely be doubted, and although some inconvenience might at first result from the difficulty of providing for the increased traffic without providing an unnecessary quantity of surplus rolling stock, that difficulty would soon disappear, and accommodation could be as readily provided to meet the requirements of the public as at the present time. The advantages which the travelling portion of the community would derive from the change is too apparent to need comment.

PRACTICAL TELEGRAPHY.

Telegraphy is now so generally regarded as a commercial necessity, that a complete and reliable hand book on the subject will be acceptable to a very large number of persons: such a work has just been supplied by Mr. R. S. CULLEY,* whose practical acquaintance with the electric telegraph service will afford a sufficient guarantee for the accuracy of the information given. The electric laws upon which the system depends, the methods of discovering faults, the practical management of apparatus, the construction of a line, and the leading principles of submarine telegraphy are carefully treated of, the author's object being to supply that technical knowledge which has hitherto been attainable only by means of verbal instruction or actual experience. He observes that the apparatus used are of two classes—those whose signals are transient and must be read off as they appear, and those which record their signals permanently, so that they can be read at leisure. The instruments used in this country of the first class are the double and single needle telegraphs of Cooke and Wheatstone; the single needle requiring one wire, and the double needle two; and a modification of the single needle, used by the Magnetic Telegraph Company. The double needle is rapidly going out of use, and the single needle is not now employed by the Electric Telegraph Company upon any important circuit, the recording instrument having been found much more accurate. The instruments of the second class are the so-called printing telegraphs of Morse and Bain, which record the signals received in an alphabet composed of dots and strokes; and that of Hughes, which prints in ordinary letters.

The commercial value of an instrument does not depend so much upon its power to record in the ordinary alphabet as upon the amount of work it will turn out, and its accuracy and freedom from derangement. The Morse instrument, and especially the ink-writer, is at present unsurpassed in these respects, and it has been found that its introduction upon a circuit previously worked by the needle system reduces errors to a considerable extent. This arises from its signals being recorded: they can be read calmly and without hurry, and should an error arise it can be traced to the person in fault, thus inducing a far greater sense of responsibility.

The work is divided into ten parts, describing respectively the sources of electricity; resistance, and the laws of the current; magnetism and electro-magnetism; electro-dynamic or current induction; electro-static or static induction; atmospheric electricity and earth currents, or deflections; insulation; the construction of a line of telegraph; ordinary testing technical terms in common use, and the modes of connecting the wires for testing; instruments for signalling, the needle instrument, printing telegraphs, switches, and translators; un-

* "A Handbook of Practical Telegraphy." By R. S. CULLEY, Engineer to the Electric and International Telegraph Company. Third Edition. London: Longmans and Co.

derground and submarine telegraphs, tunnel work, submarine cables, and the speed or capacity for work of a cable. The style of the work is such that it is at once attractive and instructive, whilst from the abundant and varied character of the particulars given it is unlikely that more information will be required by anyone. The work is profusely illustrated, and a number of tables, calculated to prove of considerable practical utility, are given, the book, as a whole, forming one of the most valuable and perfect volumes published in connection with the subject.

NEW WORK ON CORNWALL AND DEVON MINING.

Statistics and Observations on the Mines of Cornwall and Devon. By THOMAS SPARGO, Gresham House, London. The Victoria Press.

The present edition of Mr. Spargo's useful work surpasses in all respects every previous edition; in fact, the work is to all intents and purposes a new one, embracing new and original information, and articles on all subjects which are distinguishing characteristics of the two counties. Mr. Spargo being himself a Cornishman, and having practical experience of mining operations, was well qualified to furnish the details and opinions of the Cornish and neighbouring mines which the book contains. His metropolitan experience on the Exchanges and in connection with the economics of mining also qualified him to offer the advice to investors and managers which forms so useful a portion of the volume. The chapters describing the two great western counties, as to their general form, geological strata, and mineralogical peculiarities, are exceedingly interesting, abounding with information, graphic in description, graceful in style, and cogent in argument. The final chapter, upon the economics of the two counties, well deserves the consideration of all interested in the counties of Devon and Cornwall, even although wholly unconnected with mining.

It is a very important quality of this book that it is richly and accurately illustrated by maps, plans, and sections of the several mining districts, and with the sections of the workings of the more important mines. The boundaries, lodes, cross courses, and elvan courses of various mines are so graphically given, that they may almost be said to be made visible to us. Any scholar, man of science, literateur, or private gentleman will find Mr. Spargo's work pleasurable as well as instructive reading. It is not adapted to miners and investors merely—it is worthy the perusal of the general public. Any one caring to invest in mining property in the south-western counties can hardly make a mistake with this guide-book, as we may call it, in his hands. Indeed, so lucid are the arguments raised, the principles propounded, and the modes of procedure pointed out, that persons interested in metalliferous mines in any other portions of the United Kingdom, or purposing investments in such, will be greatly assisted by the perusal of this volume. Yet while this work is comprehensive it is compressed. It reminds the readers of Oliver Goldsmith's village schoolmaster—

"And still the wonder grew
That one small head could carry all he knew."

The wonder really is in this case how so small a volume could be made to comprise such general and detailed intelligence, so many important expositions and theories, and so many fine topographical and geological descriptions.

There is a historical interest in this work, which is not its least pleasing feature. It traces the history of mining in Great Britain, especially in the western counties, from the period when Phœnicians, Jews, and Britons traded for the produce of the ancient Cornish mines, upon the old Harbour sides of the Cornish coast, then known to Oriental Jews and Gentiles better than they are to day. A picture is given of the civilisation of the Cornish Britons long before the Christian era, for which many readers would not be prepared. It is proved in that part of the work that these Britons were much superior to the Gauls, if not in the civilisation of manners and social intercourse, certainly in that of commerce and the arts and appliances of life. The gradual progress of British mining is related and accounted for. For a long period, up to the latest official data, the average produce of tin and copper, the quantities raised in each county, the sum realised by the sale of the metal; the average percentage of ore raised at different periods, are all clearly placed before the reader. Mr. Spargo has evidently had access to the best official information, and must have gone to enormous expense and labour to acquire and arrange the vast body of detailed statistics which he has furnished; and in which there are no random statements and mere guess work, but everything given with minute accuracy, as well as scientific order and description.

Statistics are becoming popular, and are no longer considered to be "dry reading." The Statistical Society has done much to create this newly-acquired taste, but such works as those of Mr. Spargo, and especially the one under review, will do still more to promote so desirable a result. It is not only an instance of "Statistics made easy," but also made very agreeable and entertaining.

The different systems by which mining operations are carried on are here reviewed. The "Cost-Book," the "Limited Liability," &c., are analysed and compared; their advantages and defects are put fully and fairly before the reader; and the inferences deduced are logical, as the counsel offered is wise and faithful. Regarded from whatever point of view, the work deserves high commendation.

COMIC CORNISH POEMS.—The perusal of poems in a peculiar dialect is at all times instructive and amusing, especially to those to whom it is familiar, and the admirable little collection of "Pickings from my Portfolio," just issued (through Mr. W. Wood, of Devonport), by Mr. H. J. DANIEL, is certainly as entertaining as anything that has been published. "A Hint to Dr. Cumming," "Mary Anne's Legacy," "The Old Woman and the Pills," "The Confessor Outwitted"—indeed, every poem is well worth reading, for the whole of them are so exceedingly humorous that it is almost unfair to make a selection—it is as cheap a sixpence-worth as need be desired.

MINING IN NEVADA, U.S.

[From our Correspondent.]

The mill of the Manhattan Company, at Austin, is about to have its capacity increased by the addition of two reverberatory furnaces. When these are finished the mill will be supplied with 10 roasting-furnaces, which has been ascertained to be the perfect complement for a 20-stamp mill. This will bring out the full capacity of the batteries and the amalgamating department, and it is estimated that it will increase the production of the mill over 100 tons a month. An engine rated at 25-horse power, but which may be worked up to 40, with an ample boiler, has been placed over the Oregon shaft, belonging to this company, and will soon be in readiness for working. The hoisting-frame, of massive timber, and the reels are substantially framed and supported, the whole being well arranged as regards efficiency and space. As soon as the hoisting machinery is completed it will be put to its use, after which a commodious building will be erected over the works. The present depth of the Oregon shaft is 320 ft., the work having been pushed with great vigour since it was begun. According to calculations, the vein of the Oregon will be cut in the shaft within the depth of 350 ft., or within the next 30 ft., unless it shall pitch at a much sharper angle, while the North Star—the present productive mine of the company—will be reached at a depth of 550 ft.; when these veins shall be developed in the working shaft they will add largely to the production of the company. The management bears evidence of zeal and intelligence, and must result in splendid success.

Mr. Hall, local agent of the Morey Company, has effected a contract for the machinery of a mill which is to be erected in that district. Morey is only 15 miles north of Hot Creek district, and its mines will produce a large amount of ore, which will easily pay $100 per ton. During the last year hundreds of tons of ore produced in that district were hauled to the mill of the Old Dominion Company, at Hot Creek, the yield of which was sufficient to defray all expenses, and to leave a substantial profit. Quite a number of companies are about to commence operations in the Hot Creek country, and while these companies are laying their plans individual miners are at work on their ledges, and are meeting with good success. Messrs. Gillette and Clarke are now down only 20 feet upon the Wyoming, and are producing rock from a vein 6 feet wide, which assays throughout from $50 to $700 per ton. The New Philadelphia ledge is down 30 feet, and is putting out rock from a heavy ledge, which will pay at a rate of $100 to $180 per ton. The Wyoma is also getting out good rock. All the above mines are on the foot hills, at the mouth of Rattlesnake Canyon, in Hot Creek district.

The mill of the Smoky Valley Company, which is situated near the mouth of Geneva Canyon, is about ready to be opened. The mill is arranged for crushing the ore "wet," and the result of the experiment of treating it without roasting will be looked for with interest. The ore to be reduced is obtained from the company's mine on the Great Smoky Valley ledge, of which there is a large amount on the dump ready for the mill. It is said that a contract has been let for building a 15-stamp mill for the Utica and Herkimu Company, in the district of Washington; the motive power is to be both steam and water: the batteries are to be propelled by a steam-engine, and the amalgamating apparatus by a water-wheel.

Ostrom's mill, at Hiko, in the district of Pahranagat, was put in motion on Tuesday, April 30, and everything worked perfectly. The mill is completed, with the exception of the roasting furnaces, which are to be built immediately.

The Belmont Company's mill is now running on ore from the back ledge of the Fairview, or Highbridge Mine, taken from immediately adjoining the south line of the Combination Company's works, where a few blasts disclosed a large vein of ore of astonishing richness; there are at least 4 ft. of this ore with strata of the richest character of chloride, horneblende, and black sulphurets of silver running through it, that if properly treated would produce several hundred dollars per ton, but as the ore is being worked without roasting only about 60 per cent. is saved.

The El Dorado south is still vying with the other valuable mines of the district in producing rich ore. Stoping has been commenced at the bottom of the incline, on the north side, from which finer ore is being taken than has ever come from the mine before. A new stratum of chloride and metallic silver has been discovered near the surface, 200 ft. south of the incline, assaying as high as $2266 from choice specimens. Several tons of this ore have been lately sent to Austin for reduction to test its value. The Anzona and Atlantic Mines, near the El Dorado south, are turning out some very fine ore.

The Combination Company's Mill is turning out, as usual, from $2000 to $3000 per day, and their mines are developing a higher grade of ore as a greater depth is gained. The starting of their mill has proved that to secure any great amount of metal in the ore of that district calcination is necessary. The most of the ore heretofore worked in the district has been by the wet process, without calcination, and only from 40 to 60 per cent. of the metal saved.

RAILWAYS.—On Dec. 31, 1866, there were in England and Wales 283 railway companies whose lines were open for traffic, with a total mileage of 9701, of which 16 companies alone owned, leased, or worked 8481 miles. In Scotland at the same period there were 31 companies with 2244 miles of railway open for traffic; and in Ireland there were 39 companies with a total mileage of 1909. Nine bills have been introduced during the present session of Parliament, authorising amalgamations which, if carried out, will add 540 miles to our present railway system; and it is proposed to add 85 more by 14 bills laid before Parliament containing provisions for working arrangements.

GUN-COTTON.—A letter from France says—"The days of gun-cotton are not over yet, for it has been found that by mixing it with a certain proportion of common cotton, and enclosing the charge in a thin caoutchouc case, all its bad qualities for artillery purposes are entirely removed. A new course of artillery experiments with the wood-powder of Capt. Schultz has also been commenced at Spandau. It is supposed that the attention paid to this invention by the French Government is the reason why the Prussian Government has taken it up again. A more probable explanation is to be found in the valuable qualities of the powder itself. As it produces no fouling and very little smoke, it must be perfectly invaluable for the rapid fire of breech-loaders. A battalion that has fired six volleys in a minute with the common powder cannot see 3 yds. before it for its own smoke."

PENCIL-LEAD MINES, AND LEAD-PENCILS.—Every one knows what a black-lead pencil is, but it is not generally known that there is not a particle of lead in the pencil. The material variously known as black-lead, graphite, or plumbago is almost wholly composed of carbon. It probably owes its misnomer to the fact that previous to the employment of graphite for making pencils common lead was used, and this within the present century. For a long time the best graphite was obtained, not in very large quantities, at Borrowdale, in the English county of Cumberland, where it was discovered in 1564, early in the reign of Queen Elizabeth, and pencils much like those still in general use were produced in year following. As the supply of the graphite (known in Cumberland, while in the mine, by the title of wad), was not large, the British Government, from the first, took great pains to prevent the exportation of the article, and even to limit its home sale to a supply just sufficient to meet the estimated demand. Graphite is found in various parts of Europe, and even North America, but of very inferior quality. The Cumberland mines were worked only a few weeks in each years, yet the yield of wad was estimated at 40,000*l.* a year. While the graphite lasted, England had a monopoly in supplying the best pencils to the world. Year after year, for a century past, the graphite deposit in Cumberland became "fine by degrees and gradually less." The result was that graphite powder had to be compressed into a solid cake from which pencils could be supplied. A French variation, said to be an improvement, was to mix the powdered and purified graphite with clay, which is largely done still. Nearly 150 years ago the pencil manufacture, commenced in England and improved in France, was transplanted to the village of Stein, near Nuremberg, in Bavaria, and, little more than a century since, Casper Faber there began to make the pencils which continue to be made by his descendants, and bear the family name all through the world. The present John Lothair Faber, great grandson of Caspar, has been head of the firm since 1839, and is not only very wealthy, but was lately ennobled by the King of Bavaria. One of his brothers is associated with him at Stein, in the processes of manufacture; the youngest of the three, Eberhard Faber, represents the firm, for the Western World, at New York. Stein is literally a town of pencil factories, of which Baron Faber is the ruler, taking care of the health, government, education, industry, thrift, and amusements of the inhabitants, and always living in their midst. It may be asked—how do the Fabers make lead-pencils without the famous graphite from Cumberland? It appears that 20 years ago John Peter Alibert, a Frenchman, resident in Asiatic Siberia, having heard of the gold discoveries in California, began to examine the sandy beds of various rivers flowing into the Arctic Ocean. He found samples of pure graphite, evidently brought a considerable distance by force of the steam, in one of the mountain gorges near Irkurtsk, and pursuing his discovery, tracked back to a branch of the Salan Mountain range, on the very summit of Mount Batougol, 275 miles west of the town of Irkurtsk, near the Chinese frontier, in the midst of the rocky desert, and found pure graphite. After years of costly labour, Alibert found an exhaustless deposit of graphite, equal to the best ever taken from Cumberland. Besides decorating and rewarding him, the Russian Government changed the name of Mount Batougol to that of Mount Alibert. Nearly every crowned head in Europe has honoured him. With the consent of the Russian Government, Alibert now supplies Faber's house exclusively with graphite from the mine in Asiatic Siberia. Pencils of this material were first made by Baron Faber in 1861, and were not introduced into the American market until 1865, from which time artists and others perceived and acknowledged their superiority. If the world were to endure a thousand years more, there is sufficient graphite in Mount Alibert to supply its population with good black-lead pencils.—*Philadelphia Weekly Press.*

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending May 10 amounted to 11,358*l.* 10s. 2d.

Creditors of the Fremator Granite Quarries Company (Limited) are required to send the particulars of their claims to Mr. David Parry, of White Lion-court, Cornhill, the official liquidator—June 8 having been appointed by Vice-Chancellor Giffard for adjudicating upon them.

Mr. F. B. Smart, the liquidator of the Westminster Mining Company (Limited), has appointed Friday to settle the list of contributories.

RAILWAY WAGON WORKS, BARNSLEY.

MESSRS. G. W. AND T. CRAIK
ARE PREPARED TO
SUPPLY COAL AND COKE WAGONS
OF EVERY DESCRIPTION,
Either for cash, or by deferred payments through wagon-leasing companies.
WAGONS PROMPTLY REPAIRED.

LOCOMOTIVE TANK ENGINES FOR MINES AND COLLIERIES.

HENRY HUGHES AND CO.,
FALCON WORKS, LOUGHBOROUGH,
Have ALWAYS in PROGRESS, and can SUPPLY at short notice,
TANK ENGINES
To suit any gauge of railway and gradients from 1 in 16.

THE BEVERLEY IRON AND WAGON COMPANY
(LIMITED),
MANUFACTURERS OF RAILWAY WAGONS, WHEELS AXLES, LORRYS, CARTS, WOOD WHEELS, &c.,
IRONWORKS, BEVERLEY, YORKSHIRE.

BAGILLT OIL COMPANY (LIMITED),
FLINT.
MANUFACTURERS OF BLACK GREASE
FOR COLLIERY WIRE ROPES, TRAMS, WAGONS, &c., £5 PER TON
TORCH AND LAMP OIL, 1s. PER GALLON (Casks free).
LUBRICATING OIL, 1s. PER GALLON (Casks free).

ESTABLISHED 1847.

H. STATHAM AND COMPANY,
MANUFACTURERS OF EVERY DESCRIPTION OF
INDIA RUBBER AND GUTTA PERCHA VALVES, &c.,
WASHERS, BUFFERS, HOSE PIPES, TUBING,
STEAM PACKING, BELTING,
BLASTING TUBE FOR NITRO-GLYCERINE POWDER.
AIR AND WATER PROOF ARTICLES.
To proprietors of mines, quarries, mills, railway and steamboat companies, and all large consumers, most advantageous terms are offered.
ANY ARTICLE MADE TO SKETCH OR PATTERN.
PRICE LISTS AND SAMPLES ON APPLICATION,
11, CORPORATION STREET, MANCHESTER;
IRWELL WORKS, SALFORD.

SCHWEPPE'S MALVERN SELTZER,
PREPARED FROM THE MALVERN WATER, SO LONG CELEBRATED FOR ITS PURITY.
Every bottle is protected by a label having name and trade mark.
Manufactories at London, Liverpool, Derby, Bristol, Glasgow, Malvern.

NICHOLLS, MATHEWS, AND CO., ENGINEERS,
BEDFORD IRONWORKS, TAVISTOCK.
MANUFACTURERS of STEAM ENGINES of EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS of EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS of ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS and RAILWAY WORK of EVERY DESCRIPTION.
ALL ORDERS FOR ABROAD RECEIVE their BEST ATTENTION. NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.
Messrs. NICHOLLS, MATHEWS, and Co. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

WILLIAMS'S PERRAN FOUNDRY COMPANY,
PERRANARWORTHAL, CORNWALL.
MANUFACTURERS of STEAM PUMPING and EVERY OTHER KIND of ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.
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Passenger carriages and wagons built, either for cash or for payment over a period of years.
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CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.
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THE BIRMINGHAM WAGON COMPANY (LIMITED)
MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.
EDMUND FOWLER, Sec.
WAGON WORKS,—SMETHWICK, BIRMINGHAM.
*** Loans received on Debenture; particulars on application.
London Agent—Mr. E. B. SAVILE, 67, Victoria-street, Westminster, S.W.

STAFFORDSHIRE WHEEL AND AXLE COMPANY
(LIMITED AND REDUCED),
MANUFACTURERS of RAILWAY CARRIAGE, WAGON, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK used in the CONSTRUCTION of RAILWAY ROLLING STOCK.
OFFICES AND WORKS,
HEATH STREET SOUTH, SPRING HILL, BIRMINGHAM.
LONDON OFFICE,—118, CANNON STREET, E.C.

COAL CUTTING MACHINERY.—
The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY to MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.
The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.
All communications to be made to Messrs. FIRTH, DONISTHORPE, and BOWER, No. 8, Britannia-street, Leeds.

NOTICE.—The WEST ARDSLEY COMPANY,
having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.

ANALYSES, ASSAYS, AND CHEMICAL INVESTIGATIONS,
OF ALL DESCRIPTIONS, ARE UNDERTAKEN BY
A. NORMAN TATE, F.A.S.L., &c.,
ANALYTICAL and CONSULTING CHEMIST, and CHEMICAL ENGINEER
(Author of "Petroleum and Its Products," "The Manufacture of Caustic Soda," and other Chemical Memoirs).
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Mr. TATE, who has had many years practical experience in the erection and management of extensive chemical manufactories, and oil distilleries and refineries, also offers his services to those who may require—
PLANS, ESTIMATES, &c., for CHEMICAL WORKS, OIL DISTILLERIES and REFINERIES, and other MANUFACTORIES in which CHEMICAL PROCESSES are CONDUCTED.
The SUPERINTENDENCE of the ERECTION of WORKS or of MANUFACTURING PROCESSES.
The VALUATION of WORKS.
The EXAMINATION of PATENTS, NEW PROCESSES or APPARATUS connected with CHEMICAL MANUFACTURES.

BRITISH, COLONIAL, AND FOREIGN PATENTS,
REGISTRATION OF DESIGNS, COPYRIGHTS, TECHNICAL TRANSLATIONS, DRAWINGS, &c.
MR. MICHAEL HENRY,
Memb. Soc. Arts, Assoc. Soc. Engineers, Author of the "Inventors' Almanac," and the "Defence of the Present Patent Law,"
PATENT REGISTRATION AND COPYRIGHT AGENT AND ADVISER.
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HEATON'S PATENT.

THE LANGLEY MILL STEEL & IRONWORKS COMPANY
(LIMITED),
LANGLEY MILL, NEAR NOTTINGHAM,
Are now making Cast-Steel suitable for Tools, Taps, Dies, Chisels, &c., &c., Shear Steel, and Iron of a very superior quality, by their direct process, under the superintendence of the Patentee.
The range of quality which this process secures renders the Steel and Iron suitable for almost every purpose to which these metals can be applied. Also, CAST-STEEL CASTINGS of all kinds from PATTERNS or DRAWINGS.

TO MINING COMPANIES, MECHANICAL ENGINEERS, MERCHANTS, SHIPPING AGENTS, &c.

THE TITANIC STEEL AND IRON COMPANY,
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MANUFACTURE A VERY SUPERIOR QUALITY OF STEEL FOR
BORERS, ROCK-DRILLING, AND MINING PURPOSES
GENERALLY; ALSO FOR
LATHE TOOLS, TAPS, DIES, DRILLS, PUNCHES, CHISELS, SHEAR BLADES, SNAPS, AND BOILER MAKERS' AND SMITHS' TOOLS.
SOLID CAST-STEEL HAMMERS
CAREFULLY MADE OF BEST CAST-STEEL TO ANY PATTERN.
The Company's STEEL is manufactured according to the processes and under the supervision of
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Have the largest assortment in the Trade of PATTERNS,
SPUR WHEELS, BEVEL WHEELS, MITRE WHEELS.
ALSO
FLY WHEELS, DRIVING PULLEYS, AND DRUMS
CAN BE SUPPLIED BORED AND TURNED, IF REQUIRED.
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ALSO, MANUFACTURERS OF BLAST ENGINES, COLLIERY AND ALL OTHER DESCRIPTIONS OF STATIONARY ENGINES AND BOILERS, MILL GEARING, &c.

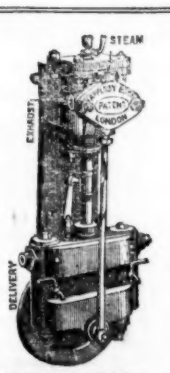
ARTESIAN BORING.
IMPROVEMENTS IN
TOOLS FOR BORING FOR WATER, COAL, AND MINERALS.
TILLEY'S PATENT.
These consist in DOING AWAY WITH THE MALE SCREW ON BORING RODS, and, by their patented arrangements, DIMINISHING THE RISK OF BREAKAGE, and RENDERING REPAIRS EASY. For prospectuses, apply to—
M. BEALE, 21, GRESHAM STREET, E.C.
Estimates given for obtaining water and boring for minerals.

PARIS EXHIBITION, 1867, GOLD MEDAL.

CLAYTON, SHUTTLEWORTH, AND CO.,
At the Great Triennial Trials of the ROYAL AGRICULTURAL SOCIETY OF ENGLAND, held at Bury St. Edmunds, July, 1867, received the following AWARDS:—
For Single Cylinder Portable Steam Engine,—THE FIRST PRIZE OF £25.
For Double Cylinder Portable Steam Engine,—THE FIRST PRIZE OF £25.
For Horizontal Cylinder Fixed Engine,—THE FIRST PRIZE OF £20.
For Double Blast Finishing Thrashing Machine,—THE PRIZE OF £15.
Also, THE SOCIETY'S SILVER MEDAL for ADJUSTING BLOCKS for Machines.

The duty performed by all C., S., and Co.'s Engines on this occasion considerably exceeded that of any others. C., S., and Co. refer with pleasure to the fact that the duty of their "Commercial" or Single Valve Engine at Chester, so long ago as 1858, was not equalled by any "ordinary" Engine at Bury.
CLAYTON, SHUTTLEWORTH, & CO., LINCOLN;
And 78, LOMBARD STREET, LONDON.

PATENT FLEXIBLE TUBING,
AND BRATTICE CLOTH FOR MINES
MANUFACTURED BY
ELLIS LEVER,
WEST GORTON WORKS, MANCHESTER.



DOUBLE-ACTING PUMP.

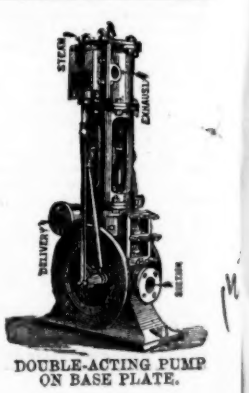
PARIS EXHIBITION, 1867—AWARDS, } Silver Medal for STEAM CRANES. Bronze Medal for DONKEY FEED PUMPS.

APPLEBY BROTHERS,
EMERSON STREET, SOUTHWARK,
LONDON, S.E.,
Engineers and Patentees of STEAM CRANES, DONKEY PUMPS, &c.

PATENT DONKEY PUMPS.

Nos.	1	2	3	4	5	6	7	8	9
Diam. of ram	1½ in.	2 in.	2¼ in.	2½ in.	2¾ in.	3 in.	3¼ in.	3½ in.	4 in.
*Gall. per hour	230	400	680	850	1200	1500	2100	2500	3800
Approx. H.P.	15	25	40	50	80	95	130	150	230
Single-acting price	£10 5	£12 10	£15	£18	—	—	—	—	—
Double-acting do.	11 10	14 0	17	20	£24	£28	£33	£38	£50
Double-acting pump on base plate					27	32	38	43	

* Calculated at 200 strokes per minute.



DOUBLE-ACTING PUMP ON BASE PLATE.

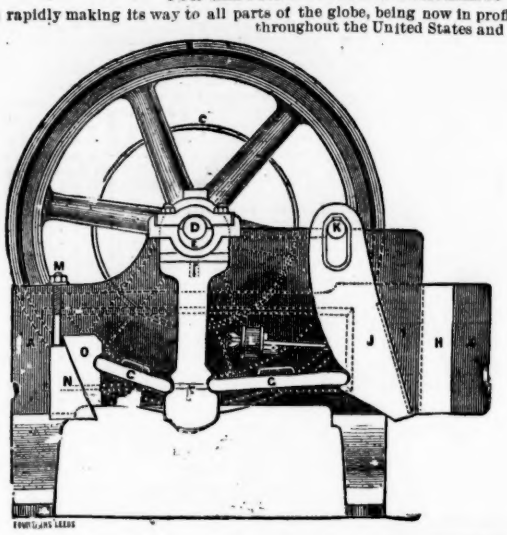
IMMENSE SAVING OF LABOUR.
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, McADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,

OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company, JAMES WILLIAMS.
H. R. Marsden, Esq.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw s about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
H. R. Marsden, Esq. — THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.
JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,

MEADOW LANE, LEEDS,
ONLY MAKER IN THE UNITED KINGDOM.

CAUTION!

BLAKE'S PATENT STONE BREAKER,

In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

SOLE MAKER IN ENGLAND,

H. R. MARSDEN, SOHO FOUNDRY, MEADOW LANE, LEEDS.

PARIS EXHIBITION, 1867. SILVER MEDALS, CLASSES 40—51.

AWARDED THE ONLY FIRST-CLASS MEDAL FOR CRUCIBLES.

THE

PATENT PLUMBAGO CRUCIBLE COMPANY,

SOLE MANUFACTURERS UNDER MORGAN'S PATENT,

BATTERSEA WORKS, LONDON, S.W.

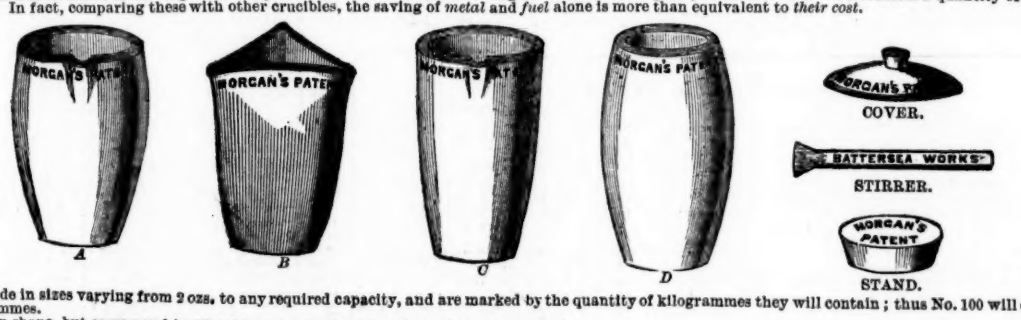
These Crucibles (MORGAN'S PATENT) *were the only ones to which Prize Medals were awarded in London*, 1862; *Dublin* 1865; *New Zealand*, 1865; *and Oporto*, 1865.

They have been in use for many years in the English, Colonial, French, and other Foreign Mints; the English, French, and other Arsenals; and have been adopted by most of the large Engineers, Founders, and Refiners at Home and Abroad.

The capabilities which have now for more than twelve years distinguished these Crucibles are:—

Their quality is uniform. They withstand the greatest heat without danger. Their average durability for Gold, Silver, Copper, and other ordinary metals is forty to fifty pourings, in some cases reaching one hundred. They never crack, and heat more rapidly than any other kind. One annealing only is required. Change of temperature has no effect. They can when hot from the furnace be dipped in cold water with safety. The saving of labour and metal is very great. (Messrs. BREEDEN and BOOTH, Birmingham, testify to the saving of 1 ton 2 qrs. 21 lbs. 4 ozs. of metal in melting 73 tons 6 cwts. of brass.) In *Steel Melting* the saving of fuel has been denomstrated to amount to a ton and a half to every ton of steel fused. For *Zinc* they last longer than iron pots, and save the great loss which arises from mixture with iron. Those for *Malleable Cast-iron* show an average working of seven days, doing each day nearly double the work of any other crucible.

As these crucibles last much longer than any others, it follows that the saving of metal must be great, because to each worn crucible a quantity of metal adheres. In fact, comparing these with other crucibles, the saving of *metal* and *fuel* alone is more than equivalent to *their cost*.



A are made in sizes varying from 2 ozs. to any required capacity, and are marked by the quantity of kilogrammes they will contain; thus No. 100 will contain 100 kilogrammes.
B differ in shape, but correspond in all other respects with *A*, and are similarly marked.
C are marked in English pounds—thus, a crucible marked 60 will contain 60 lbs.
D are made expressly for steel in various sizes.

MORGAN'S PATENT CRUCIBLES

Can be made any shape or size required, and are stamped as below:—

Having secured new Patents for our Manufacture, and to prevent fraudulent Imitations,

we call particular attention to our Trade Mark, as here shown.

"It follows, with the persistence of a law, that originators should be beset by imitators, just as in the natural world the finest organic forms are most liable to parasitical growth."—Miss METEYARD'S *Life of Josiah Wedgewood, the Potter*.

In all instances please specify "MORGAN'S PATENT," and address to—

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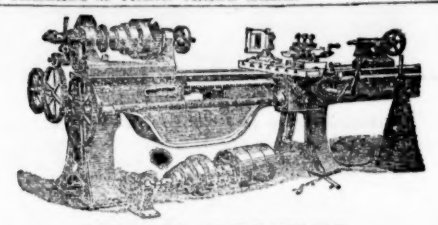
Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXPOSITION," in Paris, 1867.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—

EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.



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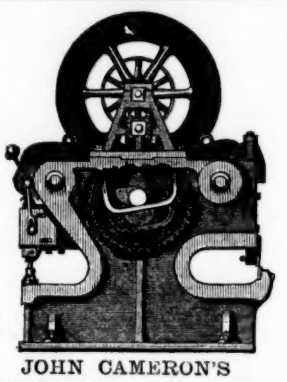

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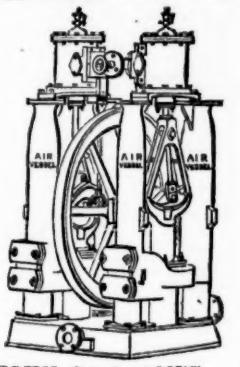

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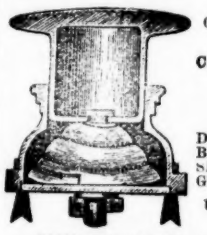

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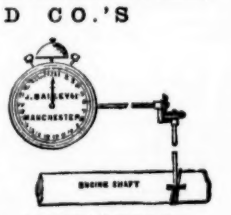

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Address, Dr. SMITH, 8, Burton-crescent, London, W.C.

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THE WYE LEAD MINING COMPANY (LIMITED).

Prospectuses of this very valuable lead mine can be obtained from J. H. Murchison, Esq., 8, Austinfriars, London, E.C. There are only 400 shares of £20 each, payable by £5 instalments, and immediate application should be made for the same.

While COPPER and TIN have been very DEPRESSED in PRICE during several years past, and, indeed, are subject to frequent fluctuations, LEAD has been comparatively STEADY, and is generally so. In proof of this, it may be stated that while in 1862 only 13 public lead mining companies divided a sum of £70,590, last year (1867) 18 divided £127,280. In the public Share List there appear 47 dividend mines, of which 20 produce lead, and show the following most favourable results:—

The aggregate amount of their paid-up capital is	£ 468,073
They have paid in dividends	1,263,587
Their aggregate market value is	1,372,657

Of these 20 mines 9 are situate in Wales, and have paid considerably more than half of the above amount of dividends. There are other lead mines in Wales and elsewhere, in private hands, and, therefore, not included in the list, that are making good profits.

8, Austinfriars, London, E.C

THE WEST BRITON MINING COMPANY,

CROWAN, CORNWALL.

FORMED UPON THE COST-BOOK PRINCIPLE.

Issue of 1000 New Shares of £1 each, making the Capital 3500 Shares of £1; and payable 5s. per share upon application, and the remainder in calls as may be required.

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THOMAS RICHARDS, Esq., Bank House, Redruth.

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JEHU HITCHINS, Esq., St. Michael's House, St. Michael's-alley, Cornhill.

SECRETARY.

Mr. MARSHALL OFFORD, 55, George-lane, Plymouth.

The West Briton Mining Company was formed in July, 1867, to work the well-known Crowan Consols copper mines, in the valuable mining district of Camborne, Cornwall.

The mines were abandoned by the former proprietors through want of sufficient capital; and the present adventurers secured the setts, and all the machinery, including a 48½ in. pumping-engine, two boilers, pitwork, &c., and all the benefits of an expenditure of over £12,000 for the nominal sum of £1250; and in addition to the Crowan Consols, the adventurers have lately secured the adjoining Wheal Curtis Mine, the Square's Sett of which, in former workings, almost paid the whole cost of the mine.

The reports of T. Richards, Esq., of Bank House, Redruth; J. Hitchins, Esq., of London; and the local manager, Capt. Wm. Rosewarne, of Leedstown, as also the opinion of the working miners of the district, amongst whom a large number of shares are held, all coincide to prove the value of the company's property, while from the fact that several tons of copper ore have already been raised by the present adventurers, as well as from the present appearance and condition of the various lodes now being operated upon, the committee think that it would be unnecessary to seek further recommendation, and they, therefore, with confidence invite applications for the new shares.

The reports already referred to demand very special attention, as pointing out the chief features of interest in the company's workings, and showing wherein the great prospect of success lies.

Copies of these reports, with prospectuses, forms of application, as well as statements of accounts as presented at the last ordinary meeting of the company, showing a balance in hand in favour of the adventurers, and every further information, can be obtained upon application to Jehu Hitchins, Esq., St. Michael's House, St. Michael's-alley, Cornhill, London, E.C.; or to the secretary, Mr. Marshall Offord, 55, George-lane, Plymouth.

NEW CLIFFORD MINE,

IN THE PARISH OF

GWENNAP, NEAR REDRUTH, CORNWALL.

Capital £24,000, in 6000 Shares, Limited to £4. £2 15s. paid.

May 1, 1868.—Having recently visited this mine, in company with Mr. John Kendall, M.E., and Captain John Goldsworthy, I beg to hand you my report of the condition and prospects of the same. The main or engine-shaft has been sunk 50 fms. below surface. For the first 26 fms. the sinking was in killas, and for the last 24 fms. through elvan. No. 2 lode was intersected in this shaft, but being in elvan was split up, but there is no doubt this lode will form a junction in depth with No. 3 lode. A cross-cut has been driven north and south of the shaft, through an unusually wide elvan course, and is now extended south nearly 50 fms., and 20 fms. north. The cross-cut south will intersect the No. 1 lode; this is possibly the most interesting point in connection with the operations at the mine, as it is believed to be the same lode which yielded immensely in the neighbouring mine, Penstruthal. This lode is expected to be met with at an early moment after getting through the elvan, which is now giving every indication of being near the south wall; the lode is, in all probability, close to the elvan, and as soon as this cross-cut is fairly into the killas or clay-slate (a stratification most congenial for metalliferous lodes) no doubt a large deposit of copper ore will be met with. The cross-cut north has been extended 20 fms., and is now fairly out of the elvan, is being driven through a congenial killas, and with three lodes ahead, which this cross-cut will prove in less than 50 fms. driving, the operations here are, perhaps, as interesting as in the cross-cut south. Weston's shaft is sunk 25 fms. on the course of a promising lode, but at the above-mentioned depth it changed its underlie or direction; the agents at once wisely determined to suspend the sinking of this shaft, as the cross-cut north would intersect this lode 25 fms. deeper, and at much less cost. The operations at these cross-cuts are full of deep interest to the shareholders, as within a short time the whole of the five lodes will be seen at a depth of from 50 to 60 fathoms from the surface. The engine-shaft is well placed to command the operations necessary for fully developing the same. Taking into consideration the locality, which has proved the richest for copper in the county of Cornwall, the chances of success (with five well-known lodes within 50 fms. north and south of the engine-shaft) are great indeed. The machinery and plant at surface are in excellent order. The engine, a 50-in. cylinder, works admirably; the buildings at surface are of the most substantial and serviceable kind, and the mine quite free from debt; the latter I need hardly mention is of great importance, as the raising of mineral will enable us at once to declare dividends, and not, as is too often the case, have to be appropriated to pay heavy arrears of outstanding liabilities. In conclusion, I would remark this is not an old mine (birds' gone, nothing left but the nest), but a virgin piece of highly-mineralised ground. The surrounding mines have paid, not thousands but millions of profits; they are, however, nearly all too deep to be profitably worked, but still remain as incontestable proofs of the richness of the district, and the eligibility of the situation and prospects of the New Clifford Mine. The following are the names of a few of the rich mines of the district immediately adjoining New Clifford, with the amount of dividends paid by each:—

Clifford Amalgamated paid (in dividends)	£1,109,828
Wheal Jewel " "	250,000
Tresavean " "	454,422
Beauchamp and Buller " "	120,000
Penstruthal " "	130,000
Damsel " "	180,000
Garland " "	150,000
Treskerby " "	200,000
Trethelhan " "	48,000
Treveskey and Barrier " "	37,000
Unity " "	333,000
Maid " "	40,000
Poldice " "	200,000
Ting Tang " "	50,000

MATTHEW GREENE.

May 1, 1868.—Agreeable with your instructions, I beg to hand you my report of the above mine, which is situated in the centre of the richest mining district in the West of England, in the parish of Gwennap, in the county of Cornwall. The sett is extensive east and west and north and south, and is intersected by an elvan course, cross-cuts, granite, and the same killas as in the rich mines adjoining. This mine contains within its limits the same lodes as exist in the rich mines of the surrounding district—viz., Tresavean, Penstruthal, Bell and Lanarth, and other lodes, and bounded west by Comford, Tresavean, and other mines, on the north by Ting Tang, &c., and on the eastward by the Gwennap United Mines, which is now a part of the Clifford Amalgamated Mines. The engine-shaft has been sunk to a 50 fm. level; the upper part of the sinking of the same is in killas, the bottom being in elvan. A cross-cut has been put out north, and intersected several branches in the elvan, the main object being to intersect the lodes in the killas which this cross-cut has entered. The lodes having a south underlay, there is no doubt in a short distance further driving you will intersect your first lode; you have, no doubt, between the present point of operations and western shaft several lodes and branches, the intersection of which are of the greatest importance, as your shaft is down about the depth where the lodes are found rich in this district. The 50 fm. level south, from present appearance, will soon leave the elvan and enter the killas. From the lode seen at surface, you will have some few fathoms to drive in killas before you will intersect the south lode underlying north. I am of opinion by prosecuting the 50 fm. level cross-cut north and south the intersection of the lodes will be crowned with the greatest success. JOHN GOLDSWORTHY.

Redruth, *May* 1, 1868.—Having recently inspected the above-named property, I herewith hand you my report. This mine is situated close to the junction of granite and killas in the richest copper district in Cornwall, having on the east Clifford Amalgamated Mine, that gave the greatest profits of any mine in the country, and on the west the well-known Tresavean and Penstruthal Mines, which were also highly profitable. The Tresavean lodes pass through this property on the south, also the Penstruthal lodes, and you have the same kind of elvan that was the cause of the large and rich deposits of copper ore in the last-named mines. The engine-shaft is sunk 50 fathoms, about the depth copper ore may be expected, and at this level a cross-cut is being driven north and south; on the south the lode is expected to be intersected in a very short time, and on the north No. 3 lode will be intersected in about two months, Nos. 4 and 5 lodes will be intersected in a few months, so the object you have been in search of is near, and seeing the same favourable indications as in the adjoining mines that made the lodes so rich; there is reason to believe that the lodes when intersected in this mine will also be good, and it is my opinion, and also the opinion of all practical miners of the neighbourhood this mine is situated in, that it will be a very profitable one in depth. JOHN KENDALL.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, c, Cheshire*	10 0 0	—		9 7 8	0 5 0	Jan. 1868
200	Botallack, t, c, St. Just	91 5 0	—		488 15 0	5 0 0	May 1866
4000	Brookwood, c, Buckfastleigh	1 11 0	—		0 10 0	0 2 6	April 1868
1000	Bronfloyd, l, Cardigan*	12 0 0	—		9 9 0	0 6 0	May 1868
6400	Cashwell, l, Cumberland*	2 10 0	—		0 1 6	0 1 6	Aug. 1866
916	Cargoll, s-l, Newlyn	15 5 7	21	20 22	14 5 0	0 10 0	Jan. 1868
509	Creegbrawse and Penkevil, t	—	—		2 5 0	1 5 0	April 1868
867	Cwm Erfin, l, Cardiganshire*	7 10 0	—		26 13 0	0 15 0	April 1868
128	Cwmystwith, l, Cardiganshire	60 0 0	—		381 10 0	2 0 0	Dec. 1867
280	Derwent Mines, s-l, Durham	300 0 0	—		174 10 0	5 0 0	June 1867
1024	Devon Gt. Consols, c, Tavistock†	1 0 0	—	445 455	1095 0 0	7 0 0	Mar. 1868
656	Ding Dong, t, Gulval‡	49 14 6	—		0 10 0	0 10 0	Sept. 1867
358	Dolcoath, c, t, Camborne	128 17 6	—		844 10 0	4 0 0	April 1868
6144	East Caradon, c, St. Cleer†	2 14 6	5	4½ 4¾	14 11 6	0 2 0	July 1867
300	East Darren, l, Cardiganshire	32 0 0	—		154 10 0	2 0 0	April 1868
128	East Pool, t, c, Pool, Illogan	24 5 0	—		432 10 0	5 0 0	May 1868
1906	East Wheal Lovell, t, Wendron	3 9 0	8⅜	7¾ 8¼	4 1 6	0 10 0	May 1868
2800	Foxdale, l, Isle of Man*	25 0 0	—		71 0 0	0 10 0	Sept. 1867
5000	Frank Mills, l, Christow	3 18 6	—		3 5 6	0 5 0	Feb. 1866
3950	Gawton, c, Tavistock	3 10 6	2½		0 3 0	0 3 0	Jan. 1868
15000	Great Laxey, l, Isle of Man*	4 0 0	17¼	16¾ 17¼	8 5 0	0 10 0	Mar. 1868
5908	Great Wheal Vor, t, c, Helston†	40 0 0	17½	15½ 16½	12 15 6	0 7 6	Mar. 1868
1024	Herodsfoot, l, near Liskeard†	8 10 0	41	38 40	45 0 0	1 10 0	Feb. 1868
6000	Hingston Down, c, Calstock†	5 10 6	—		0 10 0	0 5 0	April 1866
165	Levant, c, t, St. Just	10 8 1	—	35 40	1093 0 0	2 0 0	May 1868
400	Lisburne, l, Cardiganshire	18 15 0	—		501 10 0	3 0 0	Feb. 1868
3000	Maes-y-Safn, l, Flint*	20 0 0	—		3 15 0	0 15 0	April 1868
9000	Marke Valley, c, Caradon	4 10 6	6	6¾ 7	4 8 6	0 4 0	April 1868
3000	Minera Boundary, l, Wrexham*	1 0 0	—		0 13 0	0 3 0	Mar. 1866
1800	Minera Mining Co. l, Wrexham*	25 0 0	175	165 175	233 13 0	5 0 0	May 1868
20000	Mining Co. of Ireland, c, l, cl.	7 0 0	20		—	0 5 7	Jan. 1867
40000	Mwyndy Iron Ore*†	3 5 0	—		0 8 6	0 2 0	Mar. 1868
200	Parys Mines, c, Anglesey*	50 0 0	—		160 0 0	2 10 0	Mar. 1868
12800	Prince of Wales, t, Calstock	0 12 6	2⅝	48s. 50s.	0 4 6	0 1 0	Feb. 1868
6000	Prosper United, t, c, St. Hilary	8 14 0	—		0 5 0	0 5 0	Feb. 1867
1120	Providence, t, Uny Lelant†	10 6 7	28½	27 28	84 12 6	0 10 0	Feb. 1868
512	South Caradon, c, St. Cleer†	1 5 0	405	395 405	580 10 0	6 0 0	Mar. 1868
6000	South Darren, l, Cardigan*	3 6 6	—		0 10 0	0 1 6	April 1868
496	So. Wh. Frances, c, Illog.†‡	18 18 9	20	18 20	374 13 6	1 0 0	Mar. 1868
508	Summer Hill, l, Mold	3 13 6	—		2 5 6	0 5 0	Feb. 1868
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	15	14 15	19 6 0	0 5 0	Mar. 1868
2000	Trumpet Cons., t, Helston	11 10 0	—		12 10 0	0 10 0	Mar. 1868
3000	W. Chiverton, l, Perranzabuloe†	10 0 0	65	64 65	25 7 6	2 0 0	Feb. 1868
5000	West Godolphin, t, c, Breage	0 1 0	—		0 2 0	0 2 0	Dec. 1867
400	W. Wheal Seton, c, Camborne†	47 10 0	210	200 210	494 0 0	5 0 0	April 1868
512	Wheal Basset, c, Illogan†	5 2 6	—		631 10 0	1 0 0	April 1868
1024	Wheal Friendship, c, Tavistock	20 0 0	—		300 10 0	0 10 0	Nov. 1866
512	Wheal Jane, s-l, Kea	10 10 0	—		—	2 0 0	Jan. 1868
4295	Wheal Kitty, t, St. Agnes	5 4 6	—		3 5 0	0 2 0	Feb. 1868
1024	Wheal Mary Ann, l, Menheniot†	8 0 0	22½	21½ 22½	64 5 0	0 17 6	Mar. 1868
80	Wheal Owles, t, St. Just‡	70 0 0	—		350 13 0	7 10 0	Feb. 1868
396	Wheal Seton, t, c, Camborne	58 10 0	82½	77 80	254 15 0	2 0 0	Feb. 1868
3000	Whitewell Lead, Clitheroe*	0 5 0	—		1 0 0	0 10 0	Dec. 1867
17000	Wicklow, c, i, Wicklow	2 10 0	14½		48 16 0	0 6 0	April 1868

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
35000	Alamillos, l, Spain*†	2 0 0	2	1¾ 2	0 2 6	0 1 6	Mar. 1868
20000	Australian, c, South Australia†‡	7 7 6	—		0 1 0	0 1 0	Aug. 1867
15000	Cape Copper Mining*†	7 0 0	11½	11⅜	3 2 6	0 10 0	Feb. 1868
76162	Don Pedro North del Rey*†‡	0 14 0	2¾	2⅝ 2⅞	0 15 9	0 5 0	Mar. 1868
70000	English and Australian, c‡	2 10 0	—	¾ ⅞	—	0 1 0	Feb. 1868
25000	Fortuna, l, Spain*†	2 0 0	—		1 9 4	0 2 0	Mar. 1868
20000	Gen. Mining Assoc., Nova Scotia†	20 0 0	—		23 10 0	0 15 0	June 1867
10000	Gonnesa, l,* [5000 £5 pd., 5000 £4 pd.]		—		10 per cent.		July 1867
68000	Kapunda Mining Co., Austra†‡	1 0 0	—		0 1 4	0 0 6	May 1868
15000	Linares, t, Spain*†	3 0 0	—		11 11 8	0 3 4	Mar. 1868
50000	Panulcillo, c, Chili*†	3 0 0	—		10 per cent.		Yearly.
6000	Peel River Land and Mineral*†	100 0 0	—		—	—	
100000	Pontgibaud, s-l, France†	20 0 0	—		4 14 3	0 11 0	June 1867
10000	Port Phillip, g, Clunes†	1 0 0	1⅝	1½	1 1 0	0 1 0	May 1868
20000	Scottish Australian Min. Co.†	1 0 0	—	1 1¼	7½ per cent.		Nov. 1867
11000	St. John del Rey, Brazil*†	15 0 0	19¼	16 17	81 10 0	4 5 0	Dec. 1867
13500	Vancouver, cl*†‡	6 0 0	4¼	4 4¼	1 4 6	0 3 6	Feb. 1868
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 0	0 1 0	Jan. 1866
40000	West Canada Mining Co.*	1 0 0	—		0 19 6	0 2 6	May 1866

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
50000	Anglo-Argentine, s, Argentine Republic*	1 0 0	—		
100000	Anglo-Brazilian, g*†	0 10 0	¾	⅝ ¾	Nov. 1866
12500	Anglo-Italian, g*†	0 10 0	¾	½ ¾	Jan. 1868
20000	Australian United, g	1 0 0	—		Mar. 1868
2464	Burra Burra, c, South Australia‡	5 0 0	—		
20000	Capula, s, Mexico*†	1 14 6	—		May 1868
30000	Chontales, g, s, Nicaragua*†	5 0 0	2¾	2¼ 2½	Mar. 1868
12000	Cobre Copper Company, c, Cuba†‡*	45 10 0	—		Jan. 1868
10000	Copiapo Mining Company, Chili†‡	16 10 0	—		
10000	Copiapo Smelting, Chili*	10 0 0	—		April 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd., 150 £70 pd.]				Nov. 1866
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—		Nov. 1866
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	—		Fully pd.
50000	Frontino and Bolivia, g, New Granada*†	1 17 6	⅝	10s. 12s.	April 1868
10000	Great Barrier Land, Mining, &c., New Zealand	5 0 0	—		Fully pd.
80000	Great Northern, c, South Australia†	1 11 6	—		Sept. 1862
7927	Lusitanian (Portugal)†‡	3 0 0	—		
83640	Mariquita, g, s, New Granada	1 0 0	—		Feb. 1868
12500	Nerbudda Coal and Iron, India*†	6 0 0	—		Dec. 1867
51000	New Quebrada, c, Venezuela*†	3 10 0	—		
15000	Otea, c, New Zealand*	2 0 0	—		Fully pd.
80000	Pestarena United, g, Italy*†	2 15 0	2¾	3⅜ 3⅝	
10178	Rhenish Consolidated, l [6000 £5 pd., 4178 £2 10s. pd.]	—	—		May 1866
100000	Rossa Grande, g, Brazil*†	0 14 0	⅞	¾ ⅞	June 1867
15000	San Pedro del Monte, s, Mexico*	4 0 0	—		Sept. 1866
10000	San Roque, l, Spain	5 0 0	—		Fully pd.
100000	Taquaril, g, Brazil*	0 5 0	—		Oct. 1867
6000	Terreseu, s-l, Isle of Sardinia	2 0 0	—		
43174	United Mexican, s, Mexico†‡*	28 7 6	—	1½ 1⅝	May 1868
30000	Val Antigoria, g, Italy*	1 2 6	—		
6000	Val Sassam, s, c, l, Italy*†	7 0 0	—		Aug. 1867
45000	Victor Emanuel, c, Italy*	1 0 0	—		Fully pd.
20000	Washoe, g, Nevada†	5 0 0	—		Fully pd.
80000	Worthing, c, South Australia*†	1 0 0	½		Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0	—		Fully pd.
45000	Yudanamutana, c, South Australia*†‡	3 0 0	2	1⅞ 2⅛	Fully pd.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
914	Caradon Consols c, St. Cleer	32 13 6	—		Aug. 1867
1000	Carn Brea, c, t, Illogan‡	28 0 0	19	19 20	May 1867
5000	Carnarvonshire, l, Carnarvon*	4 0 0	6		Fully pd.
3000	Chiverton, l, Perranzabuloe	10 0 0	2½	2 2¼	Feb. 1868
3000	Chiverton Moor, l, Perranzabuloe	6 8 6	6⅜	6⅛ 6⅜	Aug. 1867
2880	Clifford Amalgamated, c, Gwennap‡	33 17 6	5⅝	5¼ 5½	June 1867
2450	Cook's Kitchen, c, Illogan‡	19 14 9	11	10½ 11½	July 1866
12800	Drake Walls, t, Calstock‡	2 5 0	—	½ ¾	Dec. 1866
512	East Basset, c, Redruth†‡	34 10 0	—		Mar. 1868
6000	East Carn Brea, c, Redruth‡	3 18 0	1¼	19s. 21s.	April 1868
6000	East Grenville, c, Camborne	3 15 6	1⅞		Feb. 1868
4000	East Wheal Russell, c, Tavistock†	13 2 6	⅞	¾ 1	April 1868
6144	Gonamena, c, St. Cleer	7 6 9	—		April 1868
5000	Great North Downs, c, Redruth	6 13 0	4	3⅞ 4⅛	Feb. 1867
4800	Great Retallack, s-l, b, Perranzabuloe	2 13 6	2½		April 1868
5143	Great South Tolgus, c, Redruth	1 8 0	—	10s. 11s.	April 1868
1798	Great Wheal Fortune, t, Breage	31 7 4	—		Mar. 1868
1024	Nangiles, t, c, Kea	30 12 0	—	12 14	May 1868
400	New Wheal Seton, c, Camborne	60 10 0	—	60 70	April 1868
3457	North Downs, c, Redruth	5 8 10	—		Jan. 1868
695	North Roskear, c, Camborne	59 9 0	12½		May 1868
5936	North Treskerby, c, St. Agnes	1 9 0	20s.	⅞ 1	Dec. 1860
5610	North Wheal Crofty, c, Illogan†	3 11 3	2½	2¼ 2½	July 1866
3000	North Wheal Chiverton, l, Perranzabuloe	4 0 0	—	4 4¼	Mar. 1867
5000	Old Westminster, l, Denbigh	2 0 0	—		June 1867
8465	Pedn-an-drea, t, Redruth	6 8 6	—		Nov. 1867
1024	Rose and Chiverton United, l, Newlyn	5 10 0	—		Feb. 1868
6138	South Condurrow, t, c, Camborne	4 0 6	—		Feb. 1868
940	St. Ives Consols, t, St. Ives‡	10 15 0	—		Nov. 1867
920	Stray Park, c, t, Camborne†‡	45 5 8	2½	2 3	April 1868
6000	Tamar Valley, s-l, Beeralston	0 7 6	—		Feb. 1868
548	Trelyon Consols, t, St. Ives	16 0 0	—		Dec. 1866
6000	West Basset, c, Illogan†‡	1 15 0	—		Mar. 1867
1024	West Caradon, c, St. Cleer‡‡	20 10 0	5½	5 6	Mar. 1868
12800	West Drake Walls, c, Calstock	0 5 0	—		Feb. 1868
2582	West Great Work, t, Breage	5 11 0	—		June 1866
6000	West St. Ives, t, c, St. Ives	0 1 0	½	9s. 11s.	Oct. 1865
512	West Wheal Frances, t, Illogan	106 15 0	—		
5000	West Wheal Kitty, t, St. Agnes	3 2 0	—		April 1868
6000	Wheal Agar, c, Illogan	7 11 0	—		Jan. 1867
512	Wheal Buller, c, Redruth†‡	25 10 0	10	8 9	May 1868
811	Wheal Emily Henrietta, c, Illogan	20 0 0	42½	39 41	Jan. 1868
5724	Wheal Grenville, c, Camborne†	10 6 0	36s.	33s. 35s.	Mar. 1868
1040	Wheal Trelawny, s-l, Liskeard†	7 12 0	9	8⅛ 9	Mar. 1868
5000	Wheal Uny, t, c, Redruth	10 14 6	2¼	2 2¼	Oct. 1867

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.
2562	Abraham Cons., t, c, Crowan	1 7 0	—	
4000	Ballacorkish, I. of Man, l, c*	3 10 0	—	
4000	Bedford Consols, c, Tavistock	2 15 0	—	
4000	Bedford United, c, Tavist.*	2 10 8	—	
1031	Bedol Aur, l, Holywell	1 17 0	—	
1248	Boscaswell, t, c, St. Just	7 6 0	—	
2500	Bosworthen and Penzance	4 0 0	—	
5000	Bottle Hill, t, Plympton	1 14 6	—	
5000	Bryn Gwiog, l, Flint	0 18 0	—	
1200	Bryn Gwyn, l, Mold*‡	9 0 0	—	
1000	Budnick Consols, c	1 0 0	—	
5094	Bwlch Consols, s-l, Cardigan	4 0 0	—	
30000	Caldbeck Fells, l, Cumberld.*	1 15 0	—	12s. 14s.
1000	Camborne Consols, c	18 10 0	—	
11000	Cape Cornwall, t, c* [8000 £2 10s. pd., 3000 25s. pd.]			
5000	Capel Banhaglog, l, Mont.	1 10 0	1⅞	
1000	Cardynham China-clay*	3 0 0	—	
6000	Carn Camborne, c, Cambrn.	2 6 0	—	
4005	Cardigan Consols*	5 0 0	—	
600	Cardiganshire, l*	17 10 0	—	
20000	Carysfort [3200 £2½ pd., 16800 £1½ pd.]			
2500	Central Minera, l, Wrexham*	3 17 6	—	
16000	Central Snailbeach l*	1 0 0	1½	
3000	Chiverton Valley, l, Perranz.	2 0 0	5	4½ 5
2048	Colquite & Callington Un., c.	0 15 0	—	
256	Condurrow, c, t, Camborne‡	76 10 0	—	
50000	Connorree, c, sul, Wicklow*	1 0 0	—	
983	Copper Hill, c, Redruth‡	12 10 0	—	
1055	Craddock Moor, c, St. Cleer‡	13 4 0	—	
12000	Crelake, c, Tavistock	3 12 0	—	
6000	Cuddra, t, St. Austell	5 5 0	—	
25000	Dundalk, Ireland, l*	0 15 0	—	
740	Eaglebrook, l, Talybont*	19 15 0	—	
1000	East Basset and Grylls, t	3 5 0	—	
6000	East Bottle Hill, t	0 11 0	—	⅛ ¼
4000	East Chiverton, l, Perranz.	2 19 3	—	
4000	E. Gunnislake & S. Bed. c.	10 15 0	1¼	
6000	East Laxey, l, Isle of Man	2 15 0	—	
6000	East Neptune, c, Marazion	—	—	
5000	E. Rosewarne, c, t, Gwinear	2 17 0	—	
6000	East Snaefell, l, I. of Man*	2 10 0	1½	
5610	East Seton, c, Camborne	0 13 6	¾	½ ⅝
1190	E. Wh. Agar, c, St. Cleer	12 17 0	—	
5000	E. Wh. Rose Con., l, Per.*	2 5 0	—	
6000	Ebury Lead Min. Co., Flint*	1 15 0	—	
6000	Fortescue Cons., c, Tavistock	0 12 6	—	
940	Fowey Con., c, Tywardreath‡	5 4 6	—	
1026	Garden, c, Morvah	6 0 3	—	
6000	Gen. Min. Co. for Ireland, c.	5 10 0	—	
10000	Glan Alun, l, Mold	0 6 0	⅜	7s. 8s.
40000	Glasgow Caradon c* [30000 £1 pd., 10000 15. pd.]			
5700	Goginan, Cardigan, l	12 10 0	—	
6000	Gothic, s-l, Cardigan*	2 10 0	—	
486	Grambler & St. Aubyn, c†‡	74 0 0	—	
10000	Great Cwmsymlog, s-l*	1 15 0	—	
4096	Great Caradon, c, St. Ive	3 19 0	—	
3000	Gt. Chiverton, s-l, Perranz.*	3 10 0	—	
5000	Great Mona, l, Isle of Man*	4 0 0	—	
12500	Gt. No. Laxey (Isle of Man)*	0 15 0	—	
1000	Great N. Tolgus, c, Illogan	10 0 0	—	
15000	Great Rhosesmor, l	5 0 0	—	
6000	Gt. S. Chiverton, s-l, Perranz	1 13 0	—	
3313	Gt. Wh. Baddern, t, Devoran	7 17 6	—	
119	Great Work, t, Germoe	100 0 0	—	
10240	Gunnislake (Clitters'), t, c.	4 19 0	—	
6068	Gwydyr Park, l, Llanrwst	1 14 6	—	
6400	Harwood, l, Durham*	0 7 6	—	
1000	Hematite Iron Company*	5 0 0	—	
2500	Laxey Neath Smelting Co.*	3 10 0	—	
1019	Leeds and St. Aubyn, t, c	19 13 4	—	
2325	Lonsdale Iron Co. [650 £5 pd., 1675 £3 pd.]			
5120	Lovell Consols, Wendron, t.	0 4 0	—	
6000	Maudlin, c, Lostwithiel	4 7 0	—	
6000	Mid-Wales, s-l,*	2 4 0	3	
1000	Montgomeryshire, l, b*	2 0 0	—	
640	Mount Pleasant, l, Mold	4 0 0	—	
12800	Nether Hearth* [6400 £1 pd., 6400 2s. pd.]			
6000	New Birch Tor & Vitifer, t‡	1 13 6	—	
1500	New Chiverton, l, Perranz.	0 9 6	1	
6000	New Clifford, c., Gwennap*	2 15 0	—	
24000	New Cornish [12000 £1 pd., 12000 15s. pd.]			
6400	N. Crow Hill, l, St. Stephen.	3 5 6	—	
6514	New E. Russell, c, Tavistock	0 12 6	—	
20000	New Gt. Cons., c, Tavistock*	0 17 6	—	
3000	New Huntingdon, t, Devon	0 1 0	—	
6400	New Pembroke, St. Blaz. t, c	1 9 0	—	
3680	New Treleigh, c, Redruth	—	—	
667	New Trevenen, t, Wendron.	12 1 6	—	
4096	New Wh. Lovell, t, Wendron	1 14 0	—	⅞ 1
2000	N. Wh. Towan, c, t, Wendron	1 10 0	—	
5000	No. Dolcoath, c, Camborne	4 3 0	—	
1361	No. Grambler, c, Redruth	8 17 3	—	
6000	North Jane, t, s-l, Kenwyn	3 1 6	—	
2000	North Levant, t, c, St. Just	10 12 0	10	
4000	No. Phœnix, c, Linkinhorne	4 11 0	—	
3933	North Pool, c, Illogan	5 16 0	—	
1024	No. Retallack, c, Perrazabuloe	2 0 0	—	
1935	No. Shepherds, l, Newlyn*	6 10 0	—	
6000	North Wheal Basset, c, t†	5 0 0	—	
6144	N.W. Robert, c, Smp. Spiney	4 8 11	—	
12288	Okel Tor, c, Calstock	2 7 4	¾	
8000	Old Gunnislake, c, Calstock	2 15 0	—	
6400	Par Consols, c, St. Blazey†‡	2 14 6	—	
5000	Pendeen Consols, c, St. Just	7 1 0	—	
4000	Penhale United, s-l, Perran.*	0 15 0	—	
2720	Penhale Wh. Vor, t, c, Breage	5 2 6	—	
5000	Penhalls, t, St. Agnes	3 0 0	—	
1772	Polberro, t, St. Agnes	15 0 0	—	
12000	Redmoor, c, t, Callington	1 17 6	—	
6000	Reinnie Laxey, l, I. of Man*	4 10 0	—	
3000	Rhydtalog, s-l, Cardigan	0 5 0	—	
6000	Roaring Water, c*	2 15 0	—	
2000	Rosecliff and Tolcarne, l*	9 10 0	—	
3973	Rosewarne Cons., c, Gwinear	7 2 6	—	
5915	Rosewall Hill & Ransom, c.	3 5 0	—	1 1⅛
10000	Royalton, t, St. Columb	1 1 0	—	
20500	Snaefell, l, Isle of Man*	1 0 0	—	
12000	Sortridge Cons., c, Tavistk.†	1 18 6	—	
512	South Basset, c, Gwennap	28 10 0	—	
3000	So. Chiverton, s, l, Perranz.	6 2 6	—	
6000	S. Dolcoath & Carnarth. Con.	2 16 6	—	
6000	So. Fowey, c, Tywardreath	0 10 0	—	
3395	So. Herodsfoot, l, Liskeard	4 10 0	—	
30210	South of Scotland, c*	1 0 0	—	
2739	South Trevenna, c, t	2 10 0	—	
937	So. Wh. Crofty, c, Illogan	24 10 10	17	15½ 16
6000	South Wheal Grenville, t, c.	1 3 0	—	
400	So. Wh. Seton, c, Camborne	81 3 0	—	
236	Spearne Consols, t, St. Just	4 4 4	—	
242	Spearne Moor, t, St. Just	6 2 0	—	
673	St. Ives Wh. Allen, t, St. Ives	18 18 7	—	
8771	St. Just Amalg., t,* [6000 £3 10s. pd., 2771 £2 5s. pd.]			
300	Steeple Aston Iron Ore Co.	7 0 0	10¾	
7000	Stiperstones, l, Salop*	5 10 0	—	
3500	Tin Hill, t, St. Austell	1 12 0	—	
501	Tresavean and Trethurrup.	16 11 0	—	
4440	Trevenen & Tremenheere	7 11 0	—	
4096	Trewetha, s-l, Menheniot	7 17 0	—	
1943	Treworlis, t, Wendron	11 15 4	—	
4200	Vigra and Clogau, c, Dolg.*‡	5 10 0	—	
1319	West Cwm Erfin, l* [319 £4 paid]			
256	West Damsel, c, Gwennap	38 10 0	—	12 1½
12000	W. Maria & Fortes., c, Lam.	3 11 6	—	
12800	West Prince of Wales, c	0 10 0	⅛	
1000	West Rose Down, c, Linking.	20 17 6	—	
512	West Tolgus, c, Redruth	58 10 0	48	
4096	W. Wh. Tremayne, c, St. Erth	0 6 0	—	
741	Wheal Basset and Grylls, t.	7 18 6	—	
6000	Wheal Crebor, c, Tavistock.	2 6 6	—	
4000	Wh. Emma, c, Buckfastleigh	3 19 0	—	
6000	Wheal Emily, s, Callington	0 1 0	—	
6000	Wheal Ida, s-l, St. Ive	1 5 6	—	
1024	Wh. Kitty, t, Uny Lelant†	3 10 6	—	5 7
896	Wh. Margaret, t, Uny Le.‡	13 17 6	6	5 6
728	Wheal Margery, St. Ives, t, c	27 4 0	—	
6000	Wheal Mary Florence, c*	2 4 0	—	
1000	Wh. Mary Hutchins, c, Plymp.	2 0 6	—	
2000	Wheal Rose, c, Scorrier	0 10 0	—	
6000	Wheal Sparnon, c, Redruth	3 15 0	—	
1920	Wh. Trannack, c, Sithney	1 13 3	—	
1200	Wheal Trevenna, t, c*	10 0 0	—	

MISCELLANEOUS.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.
60000	Anglo-American Telegrh.*†	10 0 0	23¼	
10000	Arklow Chemical Works, l.	1 0 0	—	
30000	Central American Assoc.*†	1 10 0	—	1¼ 1½
80000	Ebbw Vale Iron Co.*†	27 0 0	13⅛	
148525	London Gen. Omnibus*†	4 0 0	2⅛	

b, blende; *cl*, coal; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl.*, slate; *s-l*, silver-lead; *t*, tin; *z*, zinc.

*** Companies marked thus * have been incorporated with Limited Liability; those marked † have been admitted on the Stock Exchange, those marked thus ‡ have paid Dividends.

London: Printed by Richard Middleton, and published by Henry English (the proprietors), at their office, 26, Fleet Street, E.C., where all communications are requested to be addressed.—*May* 16, 1868.